THE AMERICAN NEPTUNE

A QUARTERLY JOURNAL OF MARITIME HISTORY

Volume XLIX, No. 3 Summer 1989

Vol. XLIX, No. 3, 1989

ISSN 0003-0155

Editor

Archibald R. Lewis
Peabody Museum of Salem

Production Manager

Geraldine Ayers
Peabody Museum of Salem

EDITORIAL ADVISORY BOARD

John C. Bower, Jr.
The Bostonian Society

Edward G. Brownlee
Cherry Hill, New Jersey

Robert H. Burgess
Mariners Museum

J. Revell Carr
Mystic Seaport

John S. Carter
Maine Maritime Museum

Lionel Casson
New York University

Charles D. Childs
Boston, Massachusetts

E. M. Eller
Rear Admiral, USN, (Ret.)

William M. Fowler, Jr.
Northeastern University

Stuart M. Frank
Kendall Whaling Museum

Eben Gay
Harvard University

E. K. Haviland
Baltimore, Maryland

John R. Herbert
Spring Hill, Florida

Francis Lee Higginson, Jr.
Rye Beach, New Hampshire

S. W. Jackman
University of Victoria, B.C.

Paul F. Johnston
Smithsonian Institution

John Haskell Kemble
Pomona College

Russell W. Knight
Marblehead, Massachusetts

Richard C. Kugler
New Bedford Whaling Museum

W. Kaye Lamb
Dominion Archivist, Ottawa

Charles S. Morgan
Concord, Massachusetts

W. J. Lewis Parker
Captain USCG, (Ret.)

David Proctor
National Maritime Museum

Timothy J. Runyan
Cleveland State University

Philip C. F. Smith
Bath, Maine

William N. Still, Jr.
East Carolina University

Vernon D. Tate
US Naval Academy

Giles M. S. Tod
Hingham, Massachusetts

Wilcomb E. Washburn
Smithsonian Institution

William D. Wilkinson
Mariners Museum

THE AMERICAN NEPTUNE is published winter, spring, summer and fall by the Peabody Museum of Salem, Massachusetts. The officers of the corporation are: Richard Wheatland II, President; Henry Schofield Streeter, Vice-President; Susanne L. Phippen, Secretary; William H. Darling, Treasurer; and Sanford Anstey, Assistant Treasurer. The support of the journal depends upon receipts from subscriptions, and no payment is made for contributions or for editorial work.

Subscriptions are accepted only for complete volumes, which coincide with the calendar year. In return for subscriptions received after the beginning of the year, subscribers will receive the numbers that have already appeared in the current volume, as well as the numbers that will be published during the remainder of the year. Single copies are $8.50 each in 1989. Certain complete volumes of back issues are available although in cases where the supply is greatly reduced some numbers are sold only as parts of complete volumes.

The editors of THE AMERICAN NEPTUNE assume editorial responsibility, but they and the Peabody Museum of Salem do not necessarily endorse the opinions expressed by authors. *Notes for Contributors* to THE AMERICAN NEPTUNE, a style manual for manuscript preparation, will be sent upon request to prospective contributors.

The American Neptune (ISSN 0003-0155) is published quarterly at $32.00 per year for domestic subscribers, $35.00 per year for foreign subscribers and $8.50 per single issue by the Peabody Museum of Salem, 161 Essex Street, East India Square, Salem, Massachusetts 01970. Subscriptions should be addressed to *The American Neptune*, and manuscripts, books for listing and correspondence should be addressed to the Editor. Second-class postage is paid at Salem, Massachusetts, and at additional mailing offices. POSTMASTER: Send address changes to The American Neptune, Peabody Museum of Salem, Museum Shop, 161 Essex Street, East India Square, Salem, Massachusetts 01970.

THE AMERICAN NEPTUNE

A QUARTERLY JOURNAL OF MARITIME HISTORY

Volume XLIX, No. 3

Summer 1989

COPYRIGHT 1989 BY THE PEABODY MUSEUM OF SALEM
SALEM, MASSACHUSETTS

PUBLISHED BY THE PEABODY MUSEUM OF SALEM, MASSACHUSETTS

HEFFERNAN PRESS INC., WORCESTER, MASSACHUSETTS

PRINTED IN THE UNITED STATES OF AMERICA

Table of Contents

Editor's Comments 150

"Not for Conquest But Discovery" Rediscovering the Ships of the Wilkes Expedition, by PHILIP K. LUNDEBERG and DANA M. WEGNER 151

Shipping In Islamic Art: Seventh Through Sixteenth Century AD, by DAVID NICOLLE 168

The Schooner Rig, Its First Appearance and Development, by MERRITT A. EDSON, JR. 198

What a Difference a Day Makes: The Royal Navy and the Yangtse Incident of 20-21 April 1949, by MALCOLM H. MURFETT 208

Legacy of a Saxon King: Royal Prints of Whale Strandings in the Peabody Museum, by KLAUS BARTHELMESS 226

Recently Processed Manuscript Collections in the Phillips Library at the Peabody Museum of Salem, by GREGOR TRINKAUS-RANDALL and ROBERT P. SPINDLER 230

Book Reviews 232

EDITOR'S

COMMENTS

WE begin this issue of the Neptune with three articles, quite different in character, that deal specifically with ships. The first, entitled *"Not for Conquest but Discovery" Rediscovering the Ships of the Wilkes Expedition* is by Philip K. Lundeberg and Dana M. Wegner. It explains how it has been possible through painstaking research to discover a great deal about the seven vessels used by the Wilkes Expedition during its important four year expedition from 1838-1842 in Pacific, Atlantic and Antarctic waters. It is particularly appropriate to publish it in the *Neptune* just now since a major exhibition mounted by the Smithsonian called "Magnificent Voyagers is on extended tour of museums thoughout the United States.

Quite different is a second offering concerning ships, David Nicolle's *"Shipping In Islamic Art: Seventh Through the Sixteenth Century."* This is of *major* importance to maritime history since prior to this article it has been believed by almost all maritime historians that it was impossible to know what Islamic ships looked like during the Middle Ages and early Modern Times. Thanks to Dr. Nicolle's painstaking examination of all sorts of manuscript and other sources this is no longer true. He has assembled over three score pictures of Islamic ships from both the Mediterranean and Indian Ocean areas. These can now be compared with better known examples of vessels from Latin Europe and the Byzantine world to see just how such ships differed or were similar in construction.

The third article on ships is provided by Merritt A. Edson Jr.'s *The Schooner Rig, Its First Appearance and Development.* He makes it clear that the first schooner rig, as we know it today, though it had some antecedents in the rigging of shallops, did not really appear until 1768 when it is mentioned in the Falconer dictionary of that year.

We then turn our attention to a longer piece which deals with China—something that seems especially appropriate in the light of today's headlines. It is *What a Difference a Day Makes: The Royal Navy and Yangtse Incident of 20-21 April 1949* by Malcolm H. Murfett. This tells the story of the last gasp of British attempts to exercise some kind of vestige of extraterritoriality on the Yangtse River in 1949 by the sloop-frigate H.M.S. *Amethyst.* Though this vessel eventually was able to escape from the Communist authorities now in control of this part of China, the whole incident poisoned British relations with the Chinese Communist government for many decades.

Finally we have two brief articles that describe important collections in the maritime field now available for use by scholars in the Peabody Museum of Salem. The first by Klaus Barthelmess is *Legacy of a Saxon King: Royal Prints of Whale Strandings in the Peabody Museum* tells of some remarkable prints of whale strandings which form part of the Francis B. Lothrop whaling collection. The second *Recently Processed Manuscript Collections at the Peabody Museum of Salem* by Gregor Trinkaus-Randall and Robert P. Spindler gives information on important recently processed collections such as the Phillips Family Papers, the Waters Family Papers, the Devereux Family Papers, the Crowninshield Family Papers and a number of others which through light on the trade of New England with the wider worlds of the late eighteenth and nineteenth centuries.

We close this issue with a number of important book reviews and with a lament that this spring the *Flying Cloud* record trip from the East Coast of the United States to San Francisco has been erased from the record books by a modern sailing craft. *Sic Transit Gloria Mundi.*

ARCHIBALD R. LEWIS

Salem, Massachusetts

"Not for Conquest But Discovery"
Rediscovering the Ships of the Wilkes Expedition

PHILIP K. LUNDEBERG and DANA M. WEGNER

THE United States Surveying and Exploring Expedition that departed Hampton Roads on 18 August 1838, the subject of a major Smithsonian exhibition—"Magnificent Voyagers"—now completing an extended tour in this country, returned to New York in 1842, nearly four years later. Notwithstanding the loss of two vessels, the expedition returned laden with scientific collections, hydrographic charts and other oceanographic data from the Pacific and Antarctic that effectively established the young nation, upon their publication, as a significant contributor in the international scientific community. The achievements of the expedition's scientific participants, led by the navy's most experienced hydrographic surveyor, Lieutenant Charles Wilkes, proved significant in the emergence of several scientific disciplines in the United States, including geology, zoology, botany, anthropology and the marine sciences. The exhibition, "Magnificent Voyagers," enabled a group of curators, archivists and historians to reappraise the surprisingly rich surviving heritage of the Wilkes expedition.

That legacy included both an extensive primary and secondary literature that stemmed from Wilkes' five-volume *Narrative* and its' accompanying scientific volumes, as well as those large scientific collections whose arrival at Washington precipitated a congressional commitment to ensure their long-term preservation in the young Smithsonian Institution.[1] Our object is not to review yet again the exploring expedition, or indeed the exhibition that traced its dramatic circumnavigation, but rather to focus on a critical aspect of the grand adventure that did not survive to the expedition's current sesquicentennial, namely Wilkes' storm-wracked squadron. None of the expedition's seven ships or significant parts of them, much less original rigged models thereof, or indeed builders' half models, have survived to afford us tangible insight into the character of those historic floating laboratories—long obscured vessels that collectively constituted a unique nursery for the natural and marine sciences in America.[2]

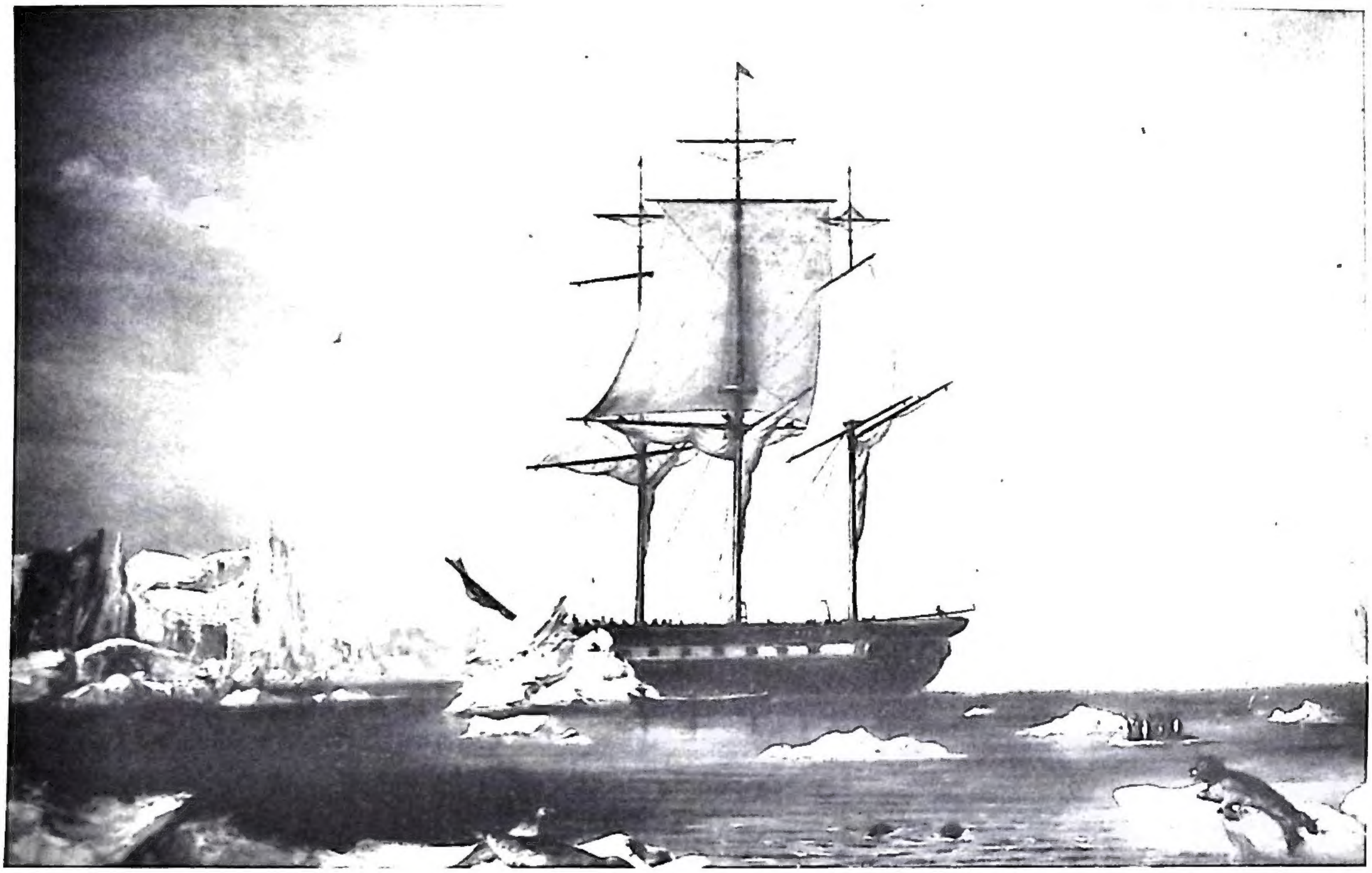
Weatherly vessels were, however, inescapable prerequisites for such heroic 19th century maritime ventures, as had been true seven decades earlier in the celebrated collaboration of Captain James Cook and Sir Joseph Banks, who had established the great tradition of scientific exploration during the Age of the Enlightenment.[3] Wilkes' own ships, mostly smaller naval vessels modified for special service, were fitted out for a cruise of over three years, in waters ranging from the broad Atlantic, the Cape Horn passage, the forbidding Antarctic ice barrier and coral-fringed Pacific island groups to our own treacherous and little-known Northwest Pacific coast, the Japanese and East Indian archipelagoes and finally, homebound, across the monsoon-swept Indian Ocean.[4] During that arduous venture none of Wilkes' scientific party, including James Dwight Dana and eight other civilian

1. Herman Viola, "The Story of the U.S. Exploring Expedition," in Herman Viola and Carolyn Margolis, eds., *Magnificent Voyagers: The United States Exploring Expedition, 1838-1842* (Washington, 1985), pp. 9-23.

2. Prior to the era of the steel warship, the U.S. Navy did not construct official models of successive classes of warships. None of Wilkes' vessels is represented in the navy's half model collection. Herman F. Krafft, comp. *Catalogue of Historic Objects at the United States Naval Academy* (Annapolis, 1925). See also the Naval History Division's *Dictionary of American Naval Fighting Ships* (8 vols., Washington, 1959-1981), III, pp. 681-700, 743-745, and K. Jack Bauer, *Ships of the Navy 1775-1969* (Troy, NY, 1969).

3. Jacques Brosse, *Great Voyages of Discovery: Circumnavigators and Scientists, 1764-1843* (New York and Oxford, 1983), pp. 35-74; Herman R. Friis, ed., *The Pacific Basin: A History of Its Geographical Exploration* (New York, 1967), pp. 237-249.

4. Wilkes' instructions are found in Charles Wilkes, *Narrative of the United States Exploring Expedition, During the Years 1838, 1839, 1840, 1841, 1842* . . . (5 vols. and atlas, Philadelphia, 1844), I, pp. xxiv-xxxii.

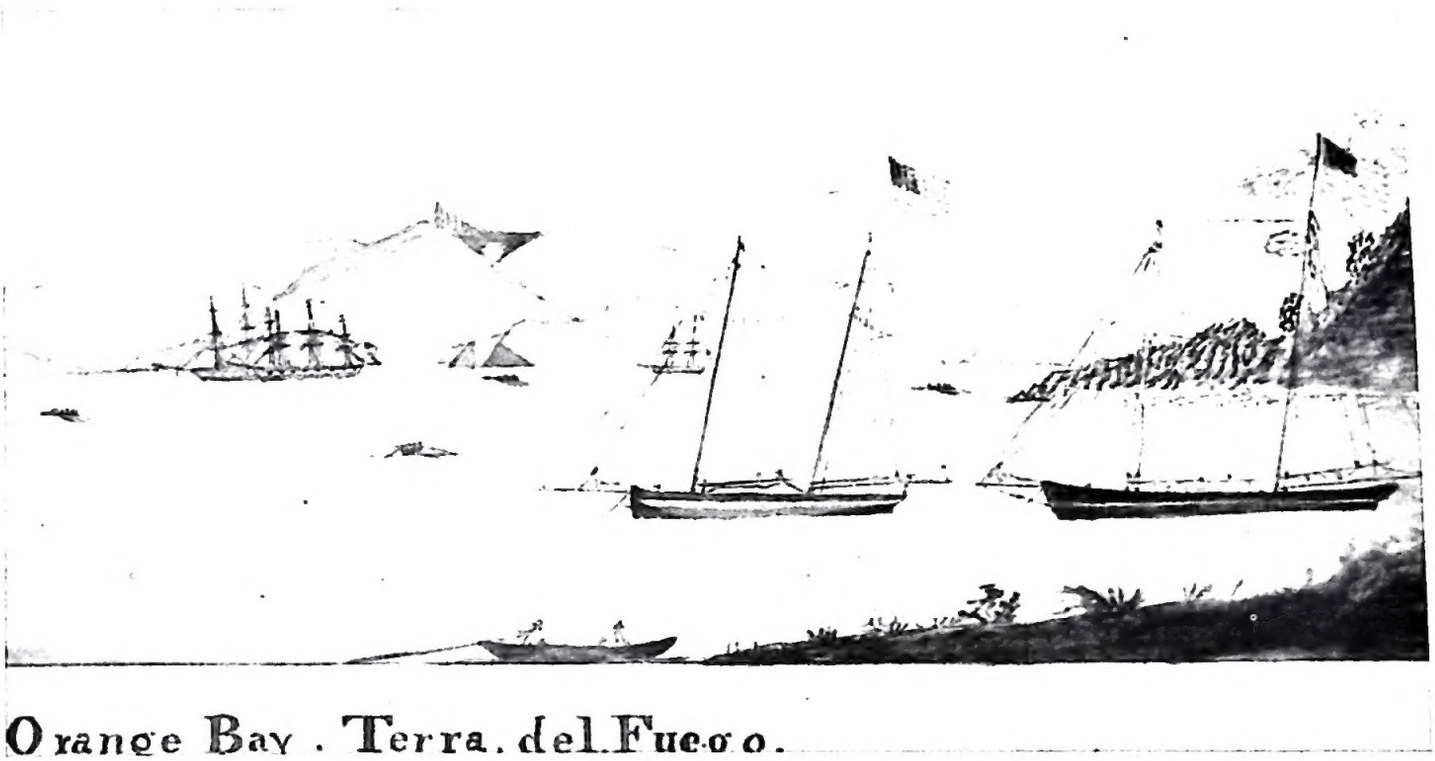


USS *Vincennes* watering in Disappointment Bay. Oil painting attributed to Charles Wilkes. Courtesy of the Peabody Museum.

colleagues, as well as several young officers of a "philosophical" or artistic bent, were to enjoy ideal working conditions. Yet certain essentials for field research were available in these ships: compartments for the storage of casks of specimens, cramped staterooms in which the occupants might study or sketch specimens, a modest library of earlier voyage accounts lodged in Wilkes' main cabin, and finally, sturdy launches that transported the avid collectors to hundreds of exotic and often unexplored locales.[5] In developing the naval side of "Magnificent Voyagers," beyond the experiences of participants, to include their survey boats and floating laboratories, the authors necessarily sought authenticity of the reconstruction in surviving architectural, graphic and related narrative detail, confronted as we were by the fact that the expedition sailed before the advent of daguerreotype photography.

The squadron that departed Hampton Roads—six vessels rather than the pair of ships customarily employed by European explorers—was an unusual aggregation, including two sloops-of-war (a step down from the frigate in terms of armament), a brig, two small schooner-rigged tenders and the U.S. Navy's first commissioned supply vessel, the packet hulled storeship *Relief.* Led by sloop-of-war *Vincennes,* a veteran of exploring and diplomatic missions in the Pacific, the expedition also mustered the sloop-of-war *Peacock,* survey brig *Porpoise,* and was rounded out by *Relief* and two former New York pilot boats, the 96-ton *Flying Fish* and 110-ton *Sea Gull*—all dimly

5. Regarding Wilkes and his "scientifics," cf. William Stanton, *The Great U.S. Exploring Expedition, 1838-1842* (Berkeley, CA, 1975); C. Ian Jackson, "Exploration as Science: Charles Wilkes and the U.S. Exploring Expedition, 1838-42," in *American Scientist,* LXXIII (1985), pp. 450-461; and A. Hunter Dupree, *Science in the Federal Government: A History of Policies and Activities to 1940* (Cambridge MA, 1957), pp. 56-61.



Tenders *Flying Fish* (right) and *Sea Gull* sketched by Passed Midshipman Samuel Knox at Orange Bay. Courtesy of the Peabody Museum.

outlined in a rare sketch made on Washington's Birthday 1839 as the squadron sheltered at Orange Bay near Cape Horn.[6] On that same occasion, the two schooners were more closely sketched by the *Flying Fish*'s former skipper, Passed Midshipman Samuel R. Knox, a graphic record rendered poignant by the fact that *Sea Gull* and her fifteen-man crew were lost without a trace off False Cape Horn some two months later.[7] *Flying Fish* (seen on the right) was more fortunate in her Antarctic ventures, which inspired publication of a heroic poem *Thulia,* by Surgeon James Palmer, and she enjoyed remarkable success in numerous inshore survey operations in the South and Central Pacific.[8] For such hazardous hydrographic work, Wilkes' men-of-war each shipped several cutters and launches, dubbed with such morale-raising names as "Panther" and "Leopard," names that proved appropriate to the desperate encounters they survived off the stormy shores of Tierra del Fuego or the cannibal-infested coasts of the Fijis.[9]

Let us take a closer look at Wilkes' substantially altered vessels, exploring their original construction, alterations at Norfolk in 1838, general appearance and their operational performance. For comparison purposes we might consider Cook's *Endeavour,* or Malaspina's *Descubierta,* the latter actually designed for the accommodation of explorer scientists.[10] More

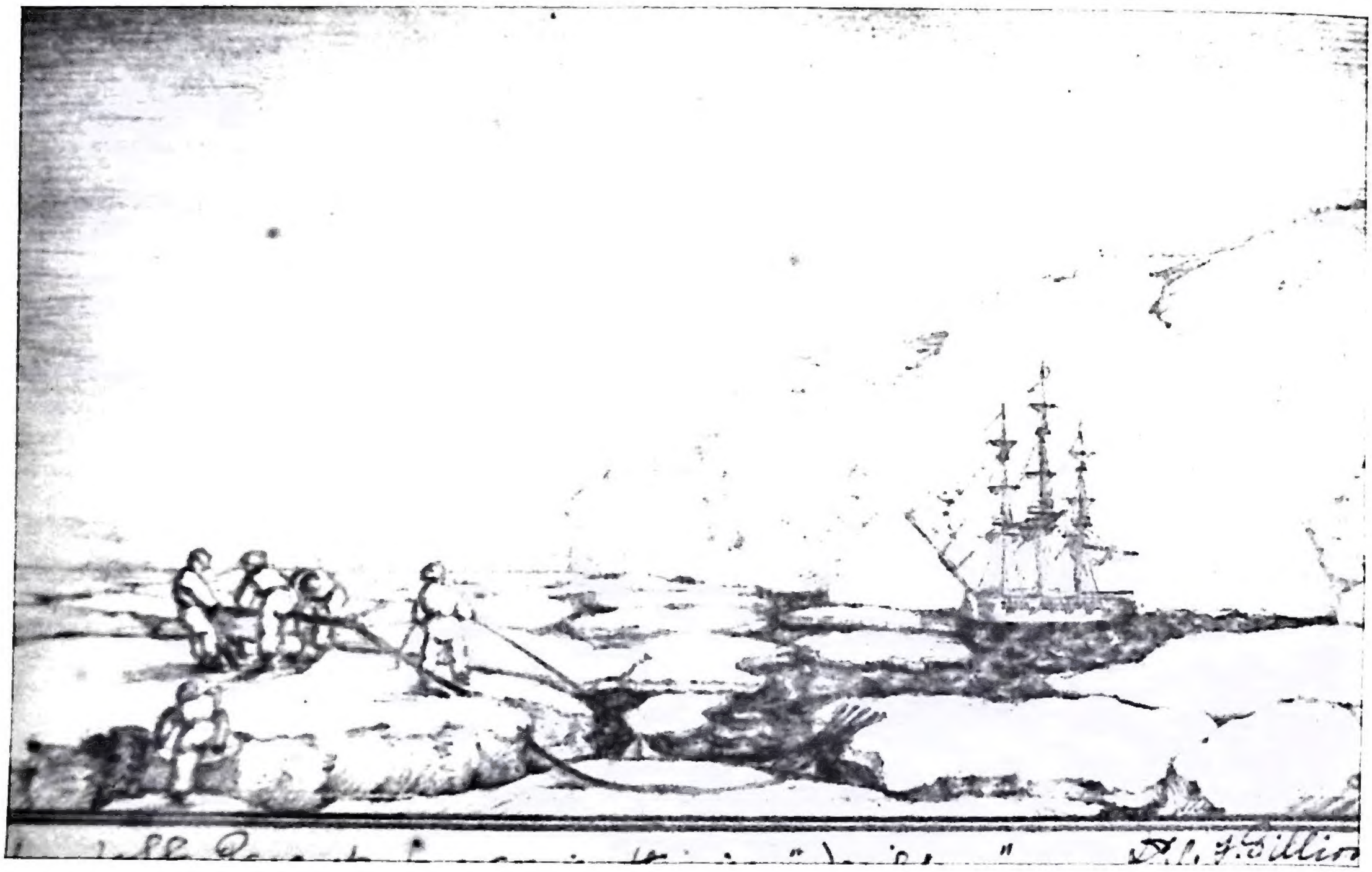
6. Sketches of the Orange Bay anchorage from this perspective appear to have been made by George Emmons, John Dale and Alfred T. Agate, providing a fine comparison of the vessels' sizes. The Emmons sketch is reproduced by courtesy of the Beinecke Rare Book and Manuscripts Library, Yale University, in Philip K. Lundeberg, "Ships and Squadron Logistics," in Viola and Margolis, *Magnificent Voyagers,* p. 154.

7. Knox sketch in the Samuel R. Knox Journal, courtesy of the Library of the Peabody Museum of Salem. Regarding the squadron, see Wilkes, *Narrative,* I, pp. xv-xvi; and Appendix I in Viola and Margolis, *Magnificent Voyagers,* p. 255.

8. James C. Palmer, *Thulia: A Tale of the Antarctic* (New York, 1843).

9. Wilkes, *Narrative,* I, pp. 142-145 and III, pp. 239-287; William J. Morgan et al., eds., *Autobiography of Rear Admiral Charles Wilkes, U.S. Navy, 1798-1877* (Washington 1978), pp. 410-411, 465-467, 476.

10. An inboard plan of the *Descubierta* and *Atrévida,* drafted by Ferdinand Bauza with accompanying description of individual compartments, reproduced in a superb exhibition booklet by Thomas



USS *Peacock* working clear of ice field. Sketched by Surgeon Charles Guillou. Courtesy of Anne Hoffman Cleaver.

appropriate for Wilkes' experience, however, was a durable rival, the French corvette *L'Astrolabe,* flagship of an expedition headed by the redoubtable Gallic explorer Dumont d'Urville, that not coincidentally found itself probing the South Polar ice barrier during the same Antarctic summer of 1840, as did Wilkes' ships on their second attempt.[11] Such comparison illuminates the task of documenting the form and outfitting of these respective vessels, while revealing startling differences in the quality of pictorial records created by artists of the two expeditions. Consider these depictions of French and American vessels working their way clear of menacing Antarctic ice fields: the first, by Surgeon Charles Guillou of the *Peacock,* the closest view of that vessel provided by an expedition participant; and the second, by Louis LeBreton showing *L'Astrolabe,* reproduced in Dumont d'Urville's *Atlas Pittoresque,* indicating the extensive detail on fittings and ornamentation undertaken by the French artists. Little wonder that in addition to modeling Wilkes' ships we undertook the French flagship as well![12]

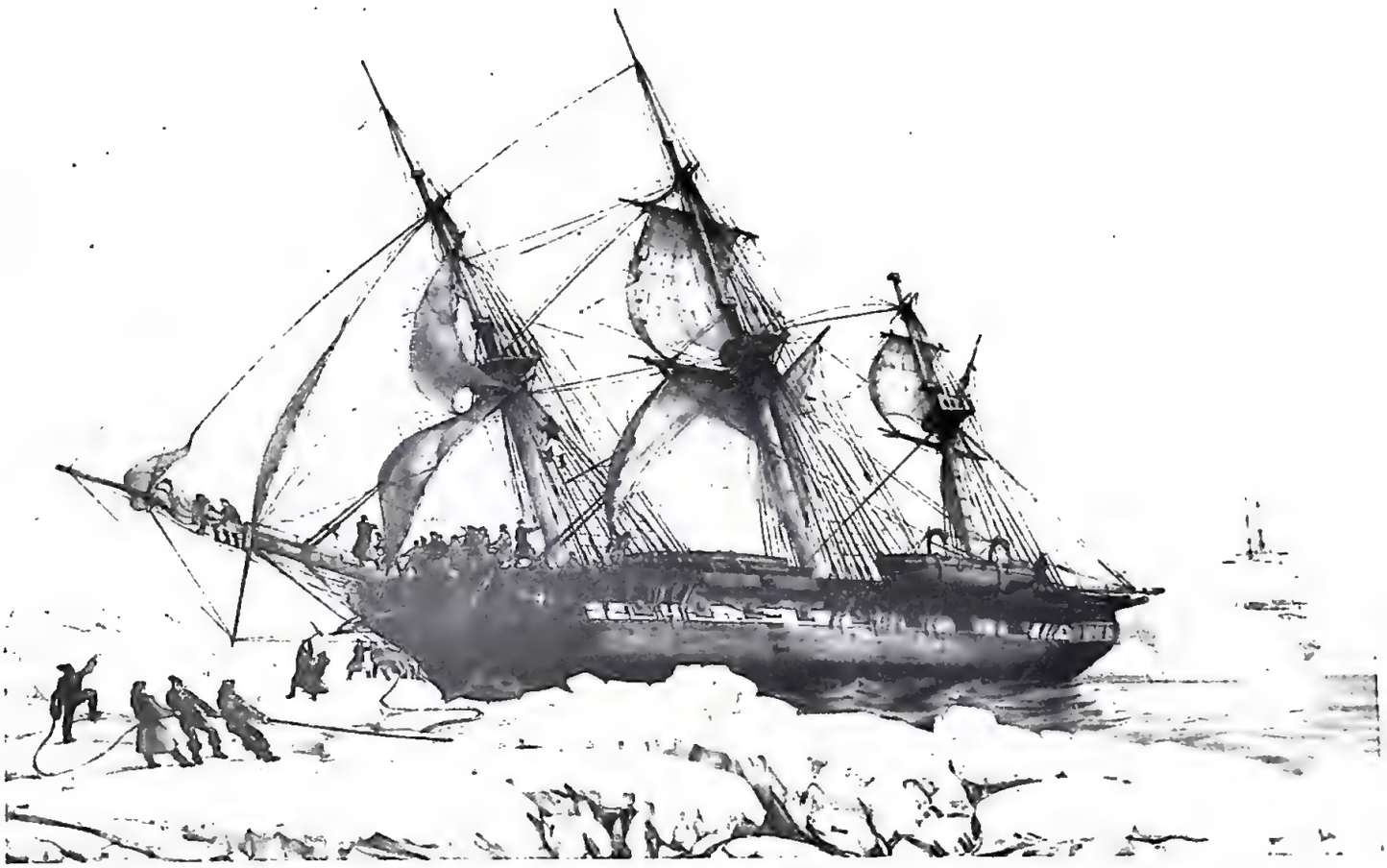
What other reliable sources, in addition to contemporary paintings and sketches, are available regarding the construction, equipage and appearance of 19th century exploring vessels prior to the era of photography? The answer led us directly to collections of

---

Vaughan, E.A.P. Crownhart-Vaughan and Mercedes Palau de Iglesias, *Voyages of Enlightenment: Malaspina on the Northwest Coast, 1791-1792* (Portland, OR, 1977), pp. 20-21.

11. Brosse, *Voyages of Discovery,* pp. 186-192. Jules S.C. Dumont d'Urville, *Voyage au Pôle Sud et dans l'Océanie sur les Corvettes "L'Astrolabe" et "La Zélée". . . , 1837 - 1838 - 1839 - 1840* (10 vols. and two vol. *Atlas Pittoresque,* Paris, 1841-1846).

12. *Ibid., Atlas Pittoresque,* I. Guillou sketch courtesy of Anne Cleaver, in Viola and Margolis, *Magnificent Voyagers,* pp. 19, 157, 160.



Corvette *L'Astrolabe* checked by the Antarctic ice pack, February 1838. Lithograph from drawings by Louis LeBreton. Courtesy of the Smithsonian Institution.

artifacts and documents in the National Archives, the Navy Department, the Smithsonian Institution and several other maritime museums and university libraries. The sources included not only manuscript holdings but also printed works, including Wilkes' rambling *Autobiography* and his official *Narrative,* which borrowed liberally from cruise journals kept by expedition participants. From such varied sources it has been possible for the navy and the Smithsonian to reconstruct in scale model form, some 150 years later, nearly all of Wilkes' long-forgotten squadron, lacking only the brig *Oregon,* a Baltimore-built merchantman acquired late in the expedition to replace earlier losses. At the heart of the required data, when available, lay the navy's official construction plans, now preserved in the Cartographic and Architectural Branch of the U.S. National Archives, including not only those draughts depicting the vessels as originally built but also, in several cases, as altered for the exploring expedition.[13]

The portfolio of drawings for a modern naval vessel would number thousands of detailed sheets, but the total documentation for a sailing warship as originally launched in the Wilkes era would usually consist of a half dozen draughts. Ship plans detail particular interior and exterior views of specific vessels, but modelers, artists, and historians today normally require plans covering three exterior areas: the hull plans, weather deck plan, and spar, rigging and sail plans. When available, these three exterior areas provide the

13. Most ship plans developed for the Bureau of Construction and Repair (later "BuShips") are contained in Record Group 19 at the National Archives, but some weather deck plans may be found in Record Group 74, the records of the Bureau of Ordnance.

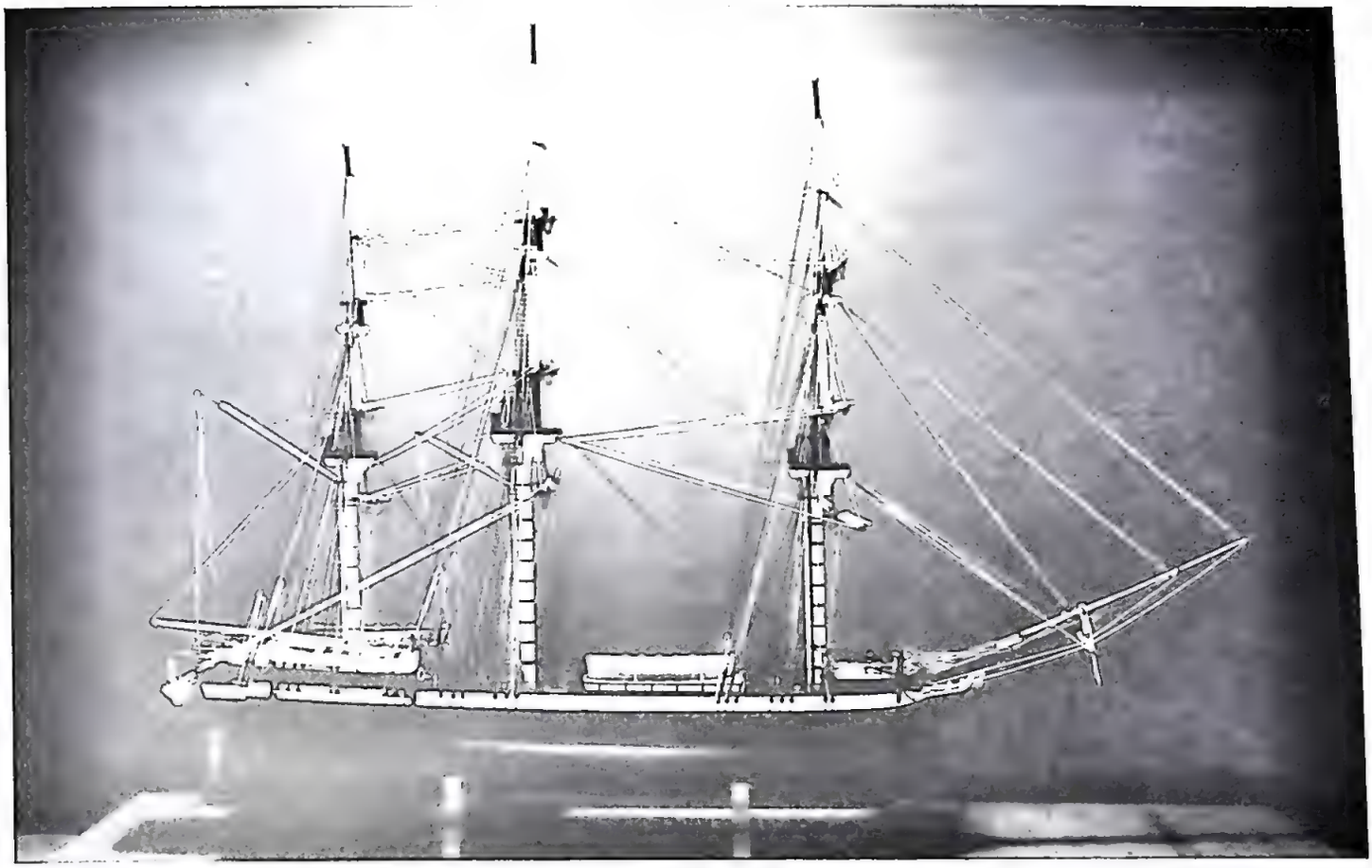
L'Astrolabe buffeted by heavy winds off the Powell Islands, 27 January 1838. Lithograph from drawing by Louis LeBreton. Courtesy of the Smithsonian Institution.

prime ingredients of form and equipage that differentiate individual sailing ships. Spar, rigging and sail plans, frequently unavailable, require evaluation against surviving paintings or sketches. The main or weather deck plan (including forecastle or poop decks when applicable), affords an overhead view of topside deck arrangements, including the location of hatches, capstans, deck houses, skylights, armament and the ship's wheel. Contemporary drawings, such as a lithograph of *L'Astrolabe* nearly capsized by a sudden gust, occasionally may again provide confirmation and additional topside detail.[14]

Primary to all, however, is the hull or lines plan, constituting a three-dimensional record of the vessel's body configuration. Employing three elevations (the sheer, half breadth and body plans), the lines plan communicates precisely to the ship builder, modeler, artist or historian the distinctive shape of a given vessel's hull, in effect employing an arbitrary system of grids, superimposed over horizontal contour lines. In a brief but memorable essay, the dean of historians of the American sailing ship era, Howard I. Chapelle, pointedly advised ". . . do not attempt to model any ship for which you do not have at least the hull lines and outboard appearance from reliable sources."[15]

14. Dumont d'Urville, *Atlas Pittoresque,* I, plate 16. See also Brosse, *Voyages of Discovery,* pp. 184, 185, and 188.

15. Howard I. Chapelle, "The Ship Model that Should Not Be Built," in the *Nautical Research Journal,* III:3, edited and republished in Merritt A. Edson, Jr., et al., *Ship Modeler's Shop Notes* (Washington, 1979), pp. 1-2.



USS *Vincennes* by Arthur Henning, Inc./Charles Newcomb. All models in 1:48 scale. Courtesy of the Smithsonian Institution.

For a rigged ship model all three sets of plans—hull, weather deck and spar-rigging-sail arrangement—are ultimately required. One or another of these plans were not available for several of Wilkes' ships that the Smithsonian and the Naval Sea Systems Command model shop at the David Taylor Research Center in Bethesda, MD undertook to recreate. Reliable alternatives are available, however, notably in the case of hull lines, which can be reconstructed from numerical offset tables or lifted off a surviving builder's half model. Such half hull models were made with great accuracy by the original shipbuilders, as a necessary adjunct to the lines plan developed by the architect.[16]

Such venerable half models, including those of the 44-gun frigate *Constitution* and more lightly armed sloop-of-war *Erie*, constitute unmistakable elements of our national treasure, artifactual sources from an era long before our navy began building fully-rigged official models. Today it is possible to reconstruct hull plans missing from official files if we can locate and accurately measure a half model that is documented to represent a particular vessel, utilizing the measurements to reconstruct the sheer, half breadth and body plans. The Smithsonian Institution's National Museum of American History provides a climate-controlled repository for both its own and much of the U.S. Navy's collection of original builders' half models. There a generation of young maritime historians has learned the art of taking the lines off these historic models, a rare introduction to the realm of naval architecture.[17]

16. Howard I. Chapelle, *The National Watercraft Collection* (2nd ed., Washington, 1976), pp. 7-12; Edson Schock, "A Method for Taking the Lines Off a Half Model," in *Nautical Research Journal*, XVIII:4 (Winter 1971), pp. 225-228.

17. The technique developed by museum specialist Howard P. Hoffman for taking the lines off a half model is described in Dana Wegner's, "An Experiment in Taking Off Lines," in *Nautical Research Journal*, XX:3 (April 1974), pp. 149-155. Photogrammetry is currently being investigated to take off half model hull lines.

USS *Peacock* by Colan D. Ratliff. Courtesy of the Smithsonian Institution.

As regards Wilkes' squadron, however, not one of its vessels is represented in the navy's collection of over two hundred half models. Happily, the lines plans of four vessels—*Vincennes, Peacock (2nd), Relief* and *Porpoise*—survive in the records of the old naval Bureau of Construction and Repair, now held at the National Archives and distilled in Colonel Chapelle's *History of the American Sailing Navy*. Excepting the two seagoing pilot boats, which had been refitted at New York, the model program for "Magnificent Voyagers" began on firm foundations—original ship draughts, supplemented by surviving plans of structural alterations carried out at the Norfolk (Gosport) Navy Yard prior to the squadron's departure.[18] Little could be derived from ships' logs regarding rig, deck layout and stem or bow carvings. But personal journals, fragmentary yard correspondence, and sketches, the latter often small and seemingly faint, added useful if limited detail. Lithographic versions of several drawings, including several by Wilkes himself, as well as by expedition artist Alfred T. Agate, illustrate the official *Narrative*,[19] but these distant depictions, which reveal more under photographic enlargement, were happily supplemented in the case of the *Flying Fish* by Agate sketches engraved for Surgeon Palmer's *Thulia*. They afford rare glimpses of shipboard life and provide invaluable detail on that schooner's cockpit, including an elliptical taffrail and deck cleats on which the helmsman steadied himself in rough weather.[20] Yet unresolved is the fate of Wilkes' original ship sketches and the entire matter of the expedition commander's policy regarding the preparation of a visual record of life on board and the ships' appearance in various settings, matters magnificently documented in the *Atlas Pittoresque* of Dumont d'Urville.[21]

Although the luminous oil portrait of *Vincennes* attributed to Wilkes offers a grand impression of her canvas, precise rigging and sail plans are lacking for expedition vessels, save for *Flying Fish,* a sentimental favorite of the entire squadron that Wilkes felt obliged to sell at Singapore, rather than risk the loss of her hardy crew on the homeward passage through the Indian Ocean during the monsoon season.[22] A remarkably detailed sail plan for the 96-ton veteran, attributed to sailmaker Samuel Hawkins on board *Vincennes,* was published in her memory, affording a detailed waterline impression of the gallant vessel that includes deck furniture as well as a comprehensive view of her

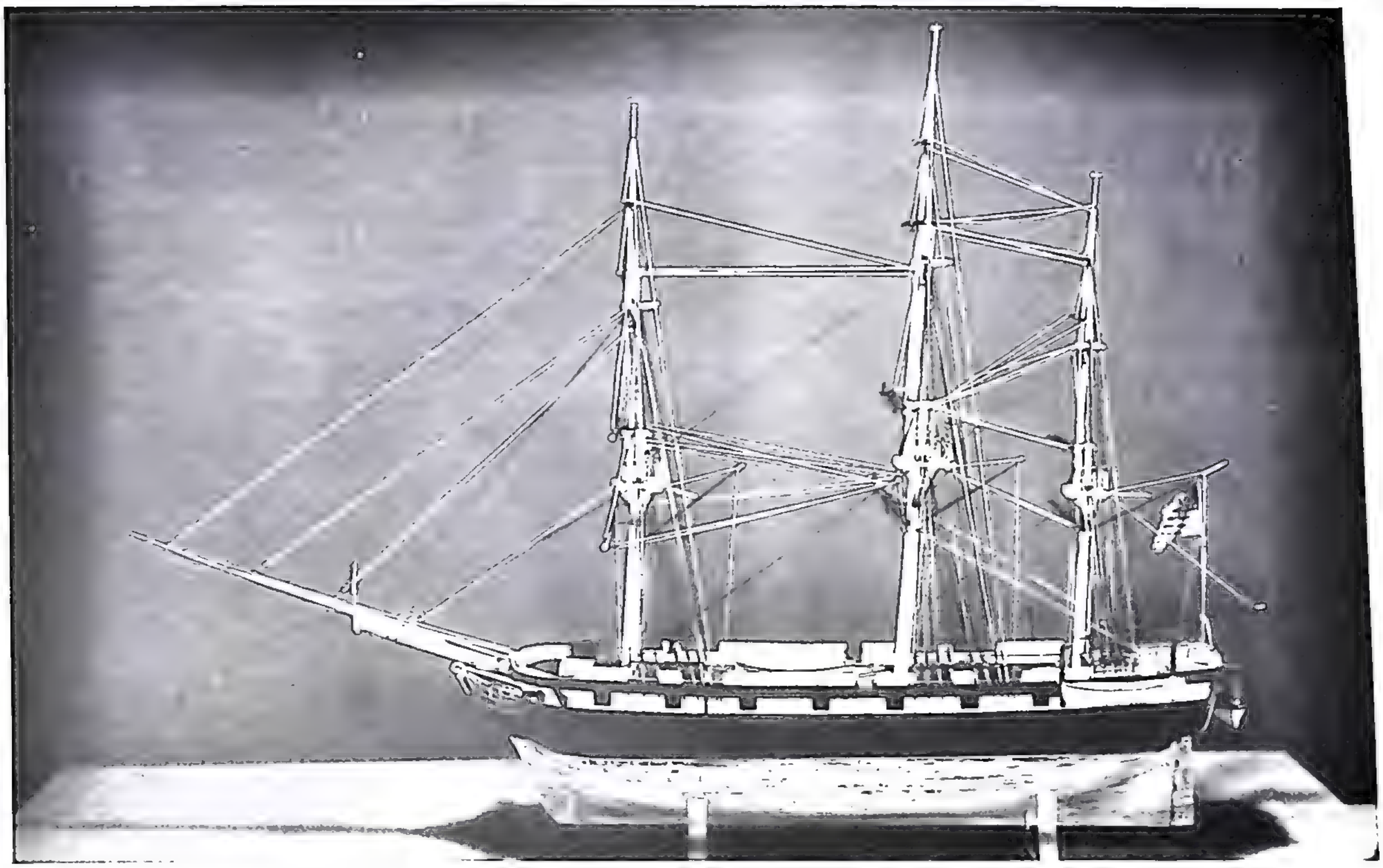
18. References to the original "Dash" plan numbers in the Bureau of Construction and Repair records, in Record Group 19 at the National Archives, are cited on the Chapelle lines plans for *Vincennes, Peacock (2nd), Relief* and *Porpoise* found in his *Sailing Navy,* pp. 345, 357, 386, 393, but are cited hereafter in the discussion of the respective vessels.

19. See the "List of Illustrations" found at the beginning of each volume of Wilkes' *Narrative*. Several previously unpublished Agate drawings and paintings are reproduced in Viola and Margolis, *Magnificent Voyagers,* through the courtesy of the Naval Historical Foundation, holder of an impressive Agate Collection.

20. Palmer, *Thulia,* pp. 5, 13, 19, 20, 25, 31.

21. See reproductions of paintings and lithographs of d'Urville's ships in Brosse, *Great Voyages of Discovery,* pp. 183, 184, and 188. Wilkes, *Narrative,* I, p. 427. Regarding Wilkes' instructions to his artists and the role of Alfred Taylor Agate, see Philip K. Lundeberg, "Legacy of an Artist-Explorer," in *Pull Together,* XXVIII:1 (Spring-Summer 1989), pp. 1-5.

22. Wilkes, *Narrative,* V, pp. 409-410; Stanton, *Great U.S. Exploring Expedition,* pp. 274-275.



USS *Relief* by Colan D. Ratliff. Courtesy of the Smithsonian Institution.

baldheaded rig. Of particular interest to curator Dana Wegner and his assistants at the David Taylor Research Center, as they undertook a model of *Flying Fish,* was the large squaresail employed as a cartouche border for the print.[23] Wegner and his principal assistant, Colan Ratliff, are interested in American use of the flying squaresail on schooners as early as the American Revolution. Though the practice is less documented than the use of topsails in schooners, both the *Flying Fish* and *Sea Gull* tender models have been rigged for occasional use of the flying squaresail as well as topsail, the latter a part of their original rig as seagoing pilot boats.[24]

As belated and controversial additions to the exploring expedition, these hardy schooners proved a fascinating challenge, for their hull lines appear never to have reached official navy files.[25] A set of offset tables for *Sea Gull* was, however, located in the William Webb Papers at the Livingston Library of the Webb Institute of Naval Architecture, making it possible for

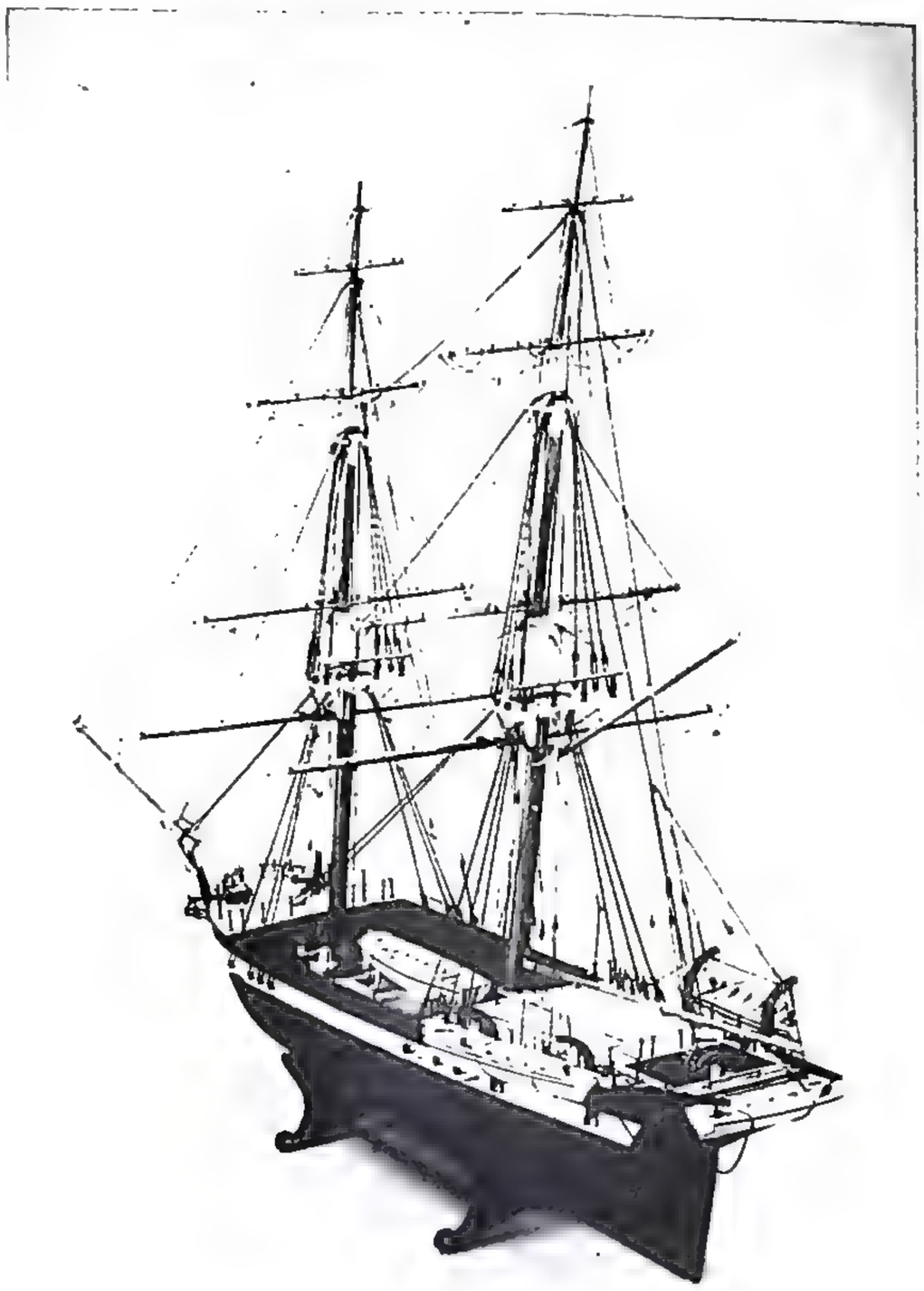
23. "United States Schooner *Flying Fish,* Tender to the Exploring Expedition. From an original draft by S.N. Hawkins, Sail maker of the U.S. Ship *Vincennes,* 1842, "a lithograph by Endicott, New York, reproduced courtesy of the Peabody Museum of Salem, in Lundeberg, "Ships and Squadron Logistics," in Viola and Margolis, *Magnificent Voyagers,* p. 163. A striking version of this image is embossed on the cover of Palmer's *Thulia.* Samuel N. Hawkins appears in Wilkes, *Narrative,* I, xxxiv.

24. See Howard I. Chapelle, *American Sailing Craft* (Camden, ME 1975), pp. 201-210; Harold Hahn, *The Colonial Schooner, 1763-1775* (Greenwich, U.K., 1981), pp. 98-99, 152-153, 171-176; Merritt A. Edson, Jr., "The Schooner Rig, A Hypothesis," in *The American Neptune,* XXV:2 (April 1965), pp. 81-92.

25. The original Bureau of Construction and Repair (or "BuShips") card file of the "Dash" plan collection contains no entries for *Flying Fish* or *Sea Gull.* The Howard I. Chapelle Papers at the Chesapeake Bay Maritime Museum contain no plans for either vessel in the materials he had been collecting on pilot boats.

Mr. Ratliff to reconstruct her lines plan.[26] Cutwater form and other details of rig were fleshed out for both vessels, employing contemporary New York pilot boat rigs and contemporary drawings made during the expedition, notably the Knox sketch at Orange Bay held in the Peabody Museum. Plans of Webb's pilot boat *John McKeon* proved particularly useful in the reconstruction, as she was of a tonnage similar as *Flying Fish* and had, like *Sea Gull,* been built by Webb.[27] The *Flying Fish* model was constructed by Michael Condon of the navy model curator's staff, while that of the ill-starred *Sea Gull* was constructed for the Smithsonian Institution by Charles J. Newcomb, well-known Eastern Shore modeler.

Of four models undertaken by the navy model shop, the sloop-of-war *Peacock* and storeship *Relief* were the work of Colan Ratliff, who researched an array of features evident in these models. As with the supply vessel, the *Peacock*'s hull was derived from original archival plans, interpreted through Chapelle, as indeed was the case of her sail plan, derived from that of a *Boston*-class sloop-of-war. Like *Vincennes,* the *Peacock* was fitted with an extended stern cabin at Gosport,[28] to accommodate scientists assigned to her, an accommodation found not only in Dumont d'Urville's *L'Astrolabe* but indeed Captain Cook's ex-collier *Endeavour.* Alteration plans from Gosport establish the forward bulkhead of *Peacock*'s cabin, but its internal subdivision is unknown, presumably somewhat similar to the stern cabin plan that survives for the flagship *Vincennes.*[29] Notable among rigging features in the *Peacock* model are the installation of iron trusses, intended to provide stronger support between masts and lower yards during the Cape Horn and Antarctic ventures. Based on Wilkes' orders while



USS *Porpoise* by William Brown. Courtesy of the Smithsonian Institution.

at Gosport, similar iron trusses were fitted to the models of *Vincennes, Relief,* and *Porpoise.*[30]

Evidence is lacking in either official plans or contemporary sketches in regard to stern or head ornamentation in *Peacock* or *Relief,* but one of Agate's Antarctic cruise drawings represents *Porpoise* with a stern eagle and two flanking stars. Wooden carvings would have suffered severely during the prolonged, heavy weather voyaging, and Wilkes' majestic depiction of *Vincennes,* watering from an ice floe, provides no suggestion of stern ornaments.[31] French artists un-

26. Plan of the USS *Sea Gull,* by Colan Ratliff, Office of the Curator of Models, 1984. *Sea Gull* offset tables are in the William Webb Papers, Livingston Library, Webb Institute of Naval Architecture, Glenn Cove, N.Y.

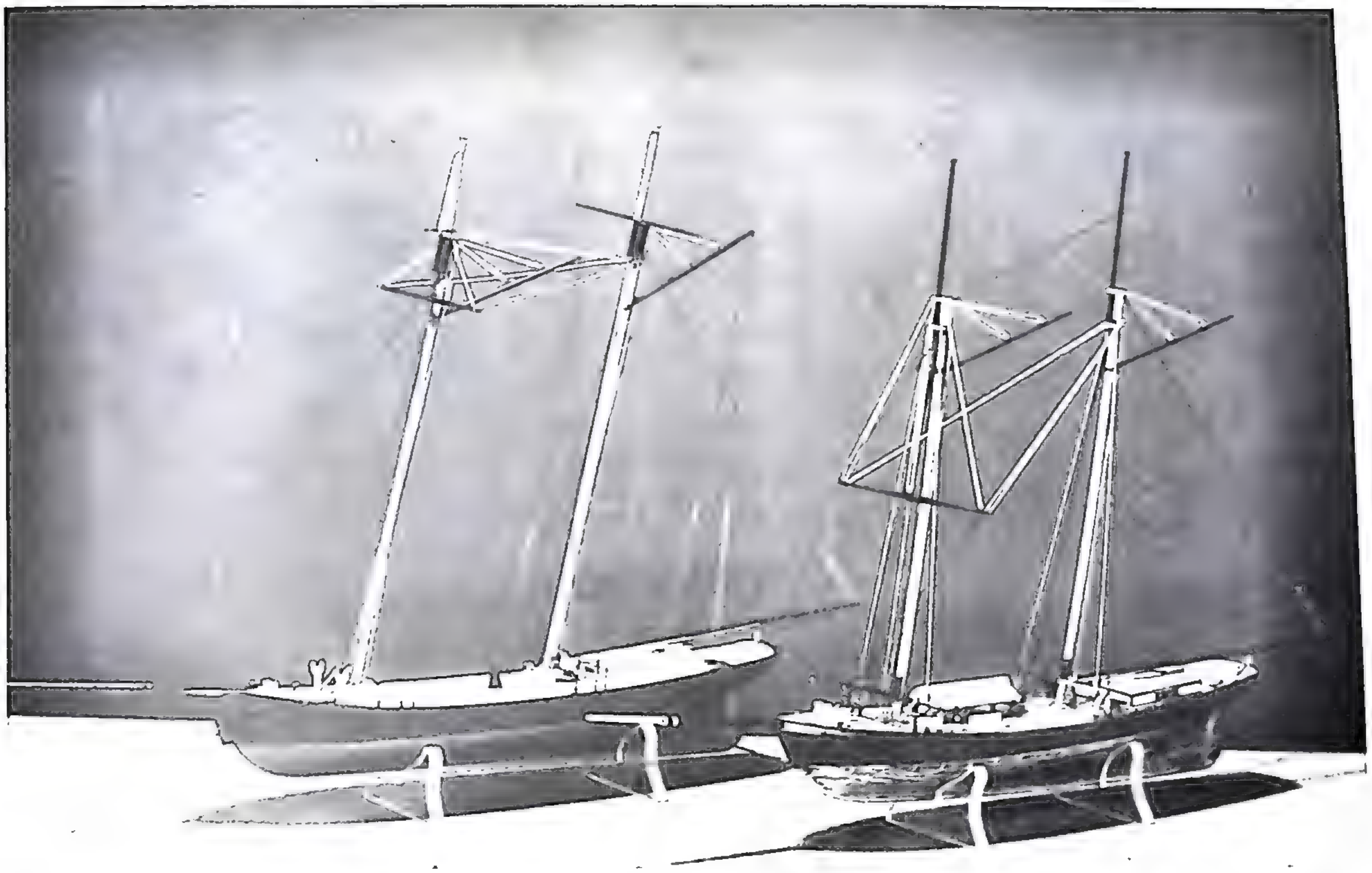
27. In addition to the Agate drawings of *Flying Fish* reproduced as lithographs in Palmer's *Thulia,* see an untitled oil of that schooner, laboring in heavy seas, found in the Alfred T. Agate Collection at the Naval Historical Foundation and reproduced in Lundeberg, "Ships and Squadron Logistics," in Viola and Margolis, *Magnificent Voyagers,* p. 158. Plan of the USS *Flying Fish,* by Colan Ratliff, Office of the Curator of Models, 1984.

28. For *Peacock* see BuShips C & R Plans 41-5-6D (lines plan by Samuel Humphreys, 1828), and 107-15-1 (alterations for polar cruise). Wilkes *Narrative,* I, xv.

29. Alteration plans showing the interior compartmentation of *Vincennes'* stern cabin are found in Plan No. 1503, in Record Group 74, Records of the Bureau of Ordnance, National Archives.

30. Board of Navy Commissioners to Commo. Charles Ridgely, 20 May 1838, in Vol. 12, Navy Commissioners letters to Yard Commandants, Entry 119, RG 45, National Archives.

31. Wilkes' original drawing of the *Vincennes* in Disappointment Bay, the basis for the full page lithograph in his *Narrative* (Vol. II, p.



USS *Sea Gull* (left) by Charles Newcomb and USS *Flying Fish* (right) by Michael Condon. Courtesy of the Smithsonian Institution.

mistakably identified both figureheads and stern ornaments on *L'Astrolabe* and her consort, *La Zélée*,[32] and it appears not unreasonable to grace *Peacock*'s stern with, in this case, not an eagle but a peacock, while for the more utilitarian *Relief,* a pair of halfmoons has been hazarded.

By no means to be forgotten, considering the expedition's magnificent hydrographic achievements, are Wilkes' intrepid survey boats, modeled in part on special survey launches constructed for one of *Peacock*'s earlier Pacific ventures and in part on double-ended whaling cutters.[33] Often fitted with small signal guns, employed in Wilkes' distinctive surveying exercise known as "firing the base line,"[34] the 32-foot launches normally rigged lateen sails while on their extended duties, which on occasion kept them cruising independently for weeks on end. The model, christened *Leopard* by its builder, Dana Wegner, represents the versatility of Wilkes' survey launches, being rigged additionally with a Congreve rocket and its launching spar, which were employed on occasions when the

---

310) and the oil painting provisionally attributed to him in the Peabody Museum, has not yet been discovered, having possibly been lost in a fire at his Philadelphia publisher.

32. Dumont d'Urville, *Atlas Pittoresque*, I, plates 94 and 172.

33. Wilkes acknowledged the expedition's particular indebtedness to Commodore Downs and Captain Percival of the Boston Navy Yard: "The boats prepared under the direction of the last named officers were found to be well adapted to the service. They were all clinker-built, with the exception of the launches, and of the description used by whalers and sealers." *Narrative*, I, xvi. Plans for the *Peacock*'s 1827 boats are found in BuShips Plan 80-7-1, in RG 19. Chapelle, *Sailing Navy*, p. 504.

34. Wilkes describes his system for conducting surveys of small islands in an essay, "Mode of Surveying the Coral Islands," in his *Narrative*, I, pp. 429-432.

Survey boat "Leopard" by Dana Wegner. Courtesy of the Smithsonian Institution.

squadron commander felt obliged to send a forceful message to Fijians angered by the operations of his survey parties.[35] A visit to "Magnificent Voyagers" reveals that the exploring expedition was by no means an entirely trouble-free mission, but the record confirms that Wilkes indeed honored the squadron's mandate that it had been dispatched "not for conquest but discovery."[36]

As at the David Taylor Research Center, the Smithsonian's naval history section encountered many fascinating problems in completing models of the *Vincennes, Sea Gull, Porpoise,* and *L'Astrolabe,* the latter two built and donated by Dr. William Brown of

35. Regarding the manner of rigging a Congreve rocket for firing from a launch, see Sir William Congreve, *Details of the Rocket System* (London, 1814), pp. 47-56. An account of the employment of rockets during landing operations on Malolo in the Fiji Islands is contained in William Erskine, *Twenty Years Before the Mast* (Boston, 1890), pp. 176-179; cf. Wilkes, *Narrative,* pp. 273-276.

36. Wilkes, *Narrative,* I, p. xxviii; Stanton, *Great U.S. Exploring Expedition,* pp. 186-215; E. Jeffrey Stann, "Charles Wilkes as Diplomat," in Viola and Margolis, *Magnificent Voyagers,* pp. 212-224; Lundeberg, "Ships and Squadron Logistics," in *op. cit.,* pp. 149, 153-154.

L'Astrolabe by William Brown. Courtesy of the Smithsonian Institution.

southern California. The *Vincennes* project was actually a conversion, for a model of the 700-ton flagship, representing her as originally launched at New York in 1826, had been completed to Chapelle's specifications as part of the warship model program initiated in the sixties for the original Hall of Armed Forces History in the new National Museum of History and Technology. To conform to *Vincennes'* configuration when she departed Norfolk in 1838, this heavily-sparred model required not only the aforementioned iron trusses but, more importantly, the installation of an extended poop deck, together with a newly-fitted stern cabin, located on the after portion of the main deck.[37] This conversion required consideration of the vessel's stern port arrangement, leading back to the Wilkes painting, which deals rather obscurely with her quarter galleries but indicates five stern windows, that replaced her two original stern gunports. No license is afforded for stern carvings, though some yet undiscovered sketch from that era may suggest a modest embellishment. Other questions remained, including the location of the flagship's reduced armament (eight 24-pdr. carronades and two 9-pdr. long guns replacing twenty-four 24-pdr. carronades), now sited fore and aft to afford maximum access for launching and stowing the ship's survey boats.[38] *Narrative* accounts of visits by native chieftains on board the flagship, phrased in a manner linking the ship's main guns with the steering wheel on the main deck, suggest locating that fascinating piece of deck furniture just forward of the stern cabin bulkhead, where the helmsman, conned from overhead, might enjoy a relatively unobstructed view forward.[39] In contrast, the *Peacock* model locates her wheel just inside the stern cabin, behind two ample windows.[40]

Official drawings for a later *Porpoise* refit in 1852 provided clearer guidance on her wheel location, indicating the installation of a rectangular cockpit well aft on her long poop deck, which similarly sheltered a new stern cabin.[41] A favorite with Wilkes since he employed her on the Georges Bank survey in 1837, *Porpoise* handled well in Antarctic gales, hazardous operations sketched by Passed Midshipman George M. Totten, who happily provided an oblique deck perspective indicating her ample forecastle, poop deck, cockpit, and quarter boats.[42] With authority these latter day models are susceptible of fine tuning, as illustrated by the aforementioned stern eagle and star carvings discovered in an Agate drawing after Dr.

---

37. See BuShips Plans 40-7-8N (inboard profile); 144-4-29A, B, C, D (lines and spars); 40-12-7 and 108-10-11 (Samuel Humphreys' lines plan, 1826), in RG 19; and Bu. Ord. Plan 1503 (stern cabin, 1838), in RG 74, National Archives. Chapelle's plan for the *Boston*-class sloops-of-war represents their original construction. See *Sailing Navy*, pp. 345-346.

38. The engraved version of Wilkes' *Vincennes* sketch indicates six stern windows, rather than five shown on the Peabody Museum canvas. Our reconstruction of *Vincennes* shows five windows, which would have made effective use of the two original gunports. Cf. Wilkes, *Narrative*, II, p. 310.

39. *Ibid.*, III, p. 57.

40. *Peacock*'s wheel arrangement is modeled on that found in contemporary whaleships.

41. For *Porpoise*, see BuShips Plans 40-9-3A and 107-15-10 (1852), in RG 19, National Archives; Chapelle, *Sailing Navy*, p. 393.

42. Wilkes, *Narrative*, II, p. 346.

Survey boat "Leopard" by Dana Wegner. Courtesy of the Smithsonian Institution.

squadron commander felt obliged to send a forceful message to Fijians angered by the operations of his survey parties.[35] A visit to "Magnificent Voyagers" reveals that the exploring expedition was by no means an entirely trouble-free mission, but the record confirms that Wilkes indeed honored the squadron's mandate that it had been dispatched "not for conquest but discovery."[36]

As at the David Taylor Research Center, the Smithsonian's naval history section encountered many fascinating problems in completing models of the *Vincennes, Sea Gull, Porpoise,* and *L'Astrolabe,* the latter two built and donated by Dr. William Brown of

35. Regarding the manner of rigging a Congreve rocket for firing from a launch, see Sir William Congreve, *Details of the Rocket System* (London, 1814), pp. 47-56. An account of the employment of rockets during landing operations on Malolo in the Fiji Islands is contained in William Erskine, *Twenty Years Before the Mast* (Boston, 1890), pp. 176-179; cf. Wilkes, *Narrative,* pp. 273-276.

36. Wilkes, *Narrative,* I, p. xxviii; Stanton, *Great U.S. Exploring Expedition,* pp. 186-215; E. Jeffrey Stann, "Charles Wilkes as Diplomat," in Viola and Margolis, *Magnificent Voyagers,* pp. 212-224; Lundeberg, "Ships and Squadron Logistics," in *op. cit.,* pp. 149, 153-154.

L'Astrolabe by William Brown. Courtesy of the Smithsonian Institution.

southern California. The *Vincennes* project was actually a conversion, for a model of the 700-ton flagship, representing her as originally launched at New York in 1826, had been completed to Chapelle's specifications as part of the warship model program initiated in the sixties for the original Hall of Armed Forces History in the new National Museum of History and Technology. To conform to *Vincennes'* configuration when she departed Norfolk in 1838, this heavily-sparred model required not only the aforementioned iron trusses but, more importantly, the installation of an extended poop deck, together with a newly-fitted stern cabin, located on the after portion of the main deck.[37] This conversion required consideration of the vessel's stern port arrangement, leading back to the Wilkes painting, which deals rather obscurely with her quarter galleries but indicates five stern windows, that replaced her two original stern gunports. No license is afforded for stern carvings, though some yet undiscovered sketch from that era may suggest a modest embellishment. Other questions remained, including the location of the flagship's reduced armament (eight 24-pdr. carronades and two 9-pdr. long guns replacing twenty-four 24-pdr. carronades), now sited fore and aft to afford maximum access for launching and stowing the ship's survey boats.[38] *Narrative* accounts of visits by native chieftains on board the flagship, phrased in a manner linking the ship's main guns with the steering wheel on the main deck, suggest locating that fascinating piece of deck furniture just forward of the stern cabin bulkhead, where the helmsman, conned from overhead, might enjoy a relatively unobstructed view forward.[39] In contrast, the *Peacock* model locates her wheel just inside the stern cabin, behind two ample windows.[40]

Official drawings for a later *Porpoise* refit in 1852 provided clearer guidance on her wheel location, indicating the installation of a rectangular cockpit well aft on her long poop deck, which similarly sheltered a new stern cabin.[41] A favorite with Wilkes since he employed her on the Georges Bank survey in 1837, *Porpoise* handled well in Antarctic gales, hazardous operations sketched by Passed Midshipman George M. Totten, who happily provided an oblique deck perspective indicating her ample forecastle, poop deck, cockpit, and quarter boats.[42] With authority these latter day models are susceptible of fine tuning, as illustrated by the aforementioned stern eagle and star carvings discovered in an Agate drawing after Dr.

---

37. See BuShips Plans 40-7-8N (inboard profile); 144-4-29A, B, C, D (lines and spars); 40-12-7 and 108-10-11 (Samuel Humphreys' lines plan, 1826), in RG 19; and Bu. Ord. Plan 1503 (stern cabin, 1838), in RG 74, National Archives. Chapelle's plan for the *Boston*-class sloops-of-war represents their original construction. See *Sailing Navy*, pp. 345-346.

38. The engraved version of Wilkes' *Vincennes* sketch indicates six stern windows, rather than five shown on the Peabody Museum canvas. Our reconstruction of *Vincennes* shows five windows, which would have made effective use of the two original gunports. Cf. Wilkes, *Narrative*, II, p. 310.

39. *Ibid.*, III, p. 57.

40. *Peacock*'s wheel arrangement is modeled on that found in contemporary whaleships.

41. For *Porpoise*, see BuShips Plans 40-9-3A and 107-15-10 (1852), in RG 19, National Archives; Chapelle, *Sailing Navy*, p. 393.

42. Wilkes, *Narrative*, II, p. 346.

Helmsman in *Flying Fish* cockpit. Lithograph from *Thulia* from sketch by Alfred T. Agate. Courtesy of the Smithsonian Institution.

Brown's *Porpoise* model had been readied for exhibition.[43] Obviously, even a century and a half after the great expedition, the last relevant document or sketch has not come to light, suggesting a particular stimulative role for "Magnificent Voyagers" as it completed its two-year tour of the West and East Coasts.

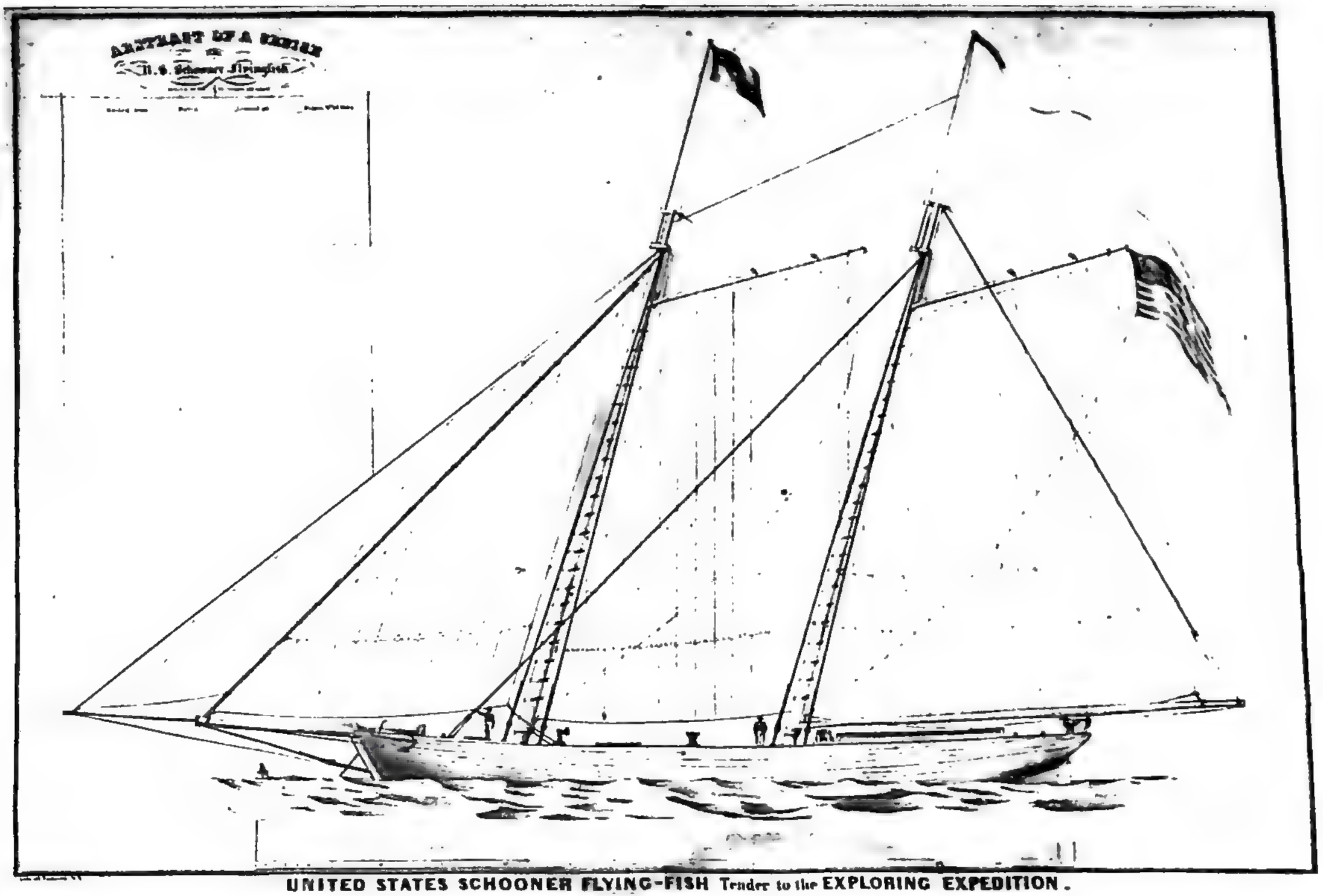
Much detail is yet needed on storeship *Relief,* the sole vessel in Wilkes' squadron constructed specifically for the expedition, being one that had survived speed and sea keeping trials held in 1837 which had eliminated a quartet of earlier nominees for the venture, including the frigate *Macedonian.*[44] The *Relief* lasted barely eleven months with the impetuous Wilkes, proving unable to keep up with the squadron on its outbound leg to Rio de Janeiro, by virtue of her bluff packet hull form. Thus the officer commanding ordered her on a final advance supply run to Hawaii and Australia before returning home with a modest cargo of scientific specimens.[45] Though *Relief*'s lines and equipage are well indicated in official plans and Chapelle's *Sailing Navy,*[46] she remains barely dis-

43. *Porpoise-Flying Fish* sketch by Titian Peale, courtesy The American Philosophical Society, Philadelphia.

44. Chapelle, *Sailing Navy,* pp. 385-392; Stanton, *Great U.S. Exploring Expedition,* pp. 35, 39-40, 51-57, 62, 70-71; Wilkes, *Narrative,* I, p. xvi.

45. *Ibid.,* I, pp. 231, 425.

46. Regarding the construction of *Relief* at Philadelphia, see correspondence between the Board of Navy Commissioners and Commo. James Barron, Commandant of the Navy Yard at Philadel-



UNITED STATES SCHOONER FLYING-FISH Tender to the EXPLORING EXPEDITION.

Lithograph showing sail plan and flying square sail (upper left) for USS *Flying Fish*. Courtesy of the Peabody Museum.

cernable in drawings by expedition participants, notably Lieutenant John Dale's tiny sketch of the squadron at Orange Bay and a vignette painted by Agate depicting her in dire distress off Noir Island, near the Straits of Magellan. This slight evidence confirms at least her gunport stripe, though little else can be derived for the model builder, save that she was square rigged![47] Although the navy had employed storeships to supply its overseas squadrons, those vessels had routinely been chartered merchantmen. The 468-ton *Relief,* as the navy's first commissioned storeship, was a small carrier for that function, having been designed by Samuel Humphreys with the tonnage capacity of a trans-Atlantic packet of that period. The packet design appeared ideally suited for the navy's first storeship, as this slower type was not expected to sail in company with its squadron but to proceed to predetermined rendezvous ports. Thus, although *Relief*'s plodding progress to the South Atlantic failed to meet Wilkes' expectations, the stockpile of provisions which she subsequently deposited at Honolulu and Sydney, in

---

phia, in James Barron Papers, G.W. Blunt White Memorial Library, Mystic Seaport, Inc.; as well as BuShips Plans 40-6-2-E (lines plans), 45-13-6 (outward profile), 45-13-7 (superstructure) and 45-13-15 (inboard profile), in RG 19, National Archives; and Chapelle, *Sailing Navy,* I, pp. 385-390.

47. The original Agate painting of *Relief* off Noir Island is in the Alfred T. Agate Collection of the Naval Historical Foundation, Washington, D.C. Cf. Wilkes, *Narrative,* I, pp. 121-161. The Dale sketch of the Squadron at Orange Bay was made from a perspective similar to the sketch by Lieutenant George Emmons, in the Beinecke Rare Book and Manuscripts Library, Yale University. The Dale sketch is in the John Dale Papers at the New England Genealogical Historical Society, Boston, MA. Regarding the Noir Island episode, see Gershom Bradford, "On a Lee Shore," in *The American Neptune*, XII, pp. 282-287.

advance of the squadron's arrival, ultimately carried the expedition much farther than might be apparent.[48]

In contrast to the limited detail on *Relief* and, in varying degree, the other vessels under Wilkes' command, it is useful to consider the French corvette *L'Astrolabe,* a veteran of two earlier Pacific voyages involving Dumont d'Urville and demonstrably one of the most distinguished ships in the history of maritime exploration.[49] Originally a horse transport, she had undergone at least two stern cabin alterations, as evidenced in detailed lithographs found in the pictorial supplements to d'Urville's two expedition narratives, notably several quarterdeck scenes rendered in great detail. From such illustrations one secures a clear impression of weather deck layout, as well as numerous details of rigging arrangement, armament (including false lower gunports) and such elusive ornaments as the figurehead and stern carvings.[50] Armed with scaled plans from the Musée de la Marine in Paris that detail its *L'Astrolabe* model (actually that of a near sister, *La Lionne*),[51] Dr. William Brown achieved a remarkably evocative rendition of that gallant rival, whose chance encounter with *Porpoise* off the Antarctic barrier on 30 January 1840 proved one of the most dramatic episodes of the nigh interminable U.S. Exploring Expedition.[52]

The exhibition "Magnificent Voyagers" provided an unusual opportunity for the ongoing ship model programs of the Naval Sea Systems Command and the National Museum of American History, programs that are essentially complementary in character. The navy has been building official exhibition models of its current or proposed men-of-war since the advent of the Steel Navy in the 1880s, following a modest beginning for the Centennial Exhibition at Philadelphia in 1876. A major exhibition of accurate, scaled models of the "Squadron of Evolution" was made at the Columbian Exposition at Chicago in 1893. There the navy's early official model builders, led by James A. Marceron and quartered in the Washington Navy Yard, won a certificate of recognition for the excellence still evident in original models of the USS *Atlanta, Olympia,* and *Maine*. The very concept of *museum-quality* exhibition ship models may well have been introduced into the United States as early as 1883 by the Bureau of Construction and Repair, doubtless influenced by contemporary builder's models viewed by American naval observers in Europe.[53] While fine ship models existed in America's private and museum collections prior to 1883, it is difficult to identify any models exhibiting the required degree of technical accuracy and finesse of execution predating the navy collection. For the navy's modern ship modeling team, the opportunity to construct several museum-quality models of pre-steel era vessels made the recent collaboration with the Smithsonian particularly attractive. Following the tour of "Magnificent Voyagers" during 1987-1989, the navy's "Wilkes models" will undoubtedly be in demand, both in the navy museum system and beyond.

The Smithsonian warship model program, initiated some three decades ago in preparation for the opening of the present National Museum of American History, has complemented the navy's distinguished Steel Navy program by building backward from the post-Civil War decades to the Colonial era, indeed to a model representing HMS *Faulkland,* constructed in 1694-95 near the site of the present Portsmouth Navy Yard on the Piscataqua River. Its most recent additions, models of *Porpoise, Sea Gull,* and the altered *Vincennes,* have enabled the Smithsonian to add models of three more vessels notably associated with the great peacetime ventures undertaken by our navy during the last century and a half. These models now join those of Commodore Matthew C. Perry's distinctive flagships, the steamers *Mississippi* and *Powhatan,* which were completed two decades ago for the Smithsonian's memorable "Black Ships" exhibition.[54] And, perhaps looking to the future, they join a model of the

48. Wilkes, *Narrative,* I, pp. 425-426; Lundeberg, "Ships and Squadron Logistics," in Viola and Margolis, *Magnificent Voyagers,* pp. 154-156.

49. Robert J. Garry, "Geographical Exploration by the French," in Friis, *The Pacific Basin,* pp. 215-220; Brosse, *Voyages of Discovery,* pp. 152-160, 184-194; Etienne Taillemite, "French Contribution to the Discovery of the Pacific," in International Congress of Maritime Museums, *Fourth Conference Proceedings, Paris, 1981* (Paris, 1981), pp. 69-81.

50. Dumont d'Urville, *Atlas Pittoresque,* I, plates 15, 16, 22, 94; II, 129, 167, 172.

51. Plans, photographs and a description of the *L'Astrolabe* model in the Musée de la Marine in Paris are provided in the brochure *L'Astrolabe (ex: La Coquille) Corvette de 380 Tonneaux,* published by Le Amis des Musées de la Marine. Cf. the plans for *L'Astrolabe* in Edmond de Paris, *Souvenirs de Marine Conservés . . .* (5 vols., Paris, 1877-1886).

52. Wilkes, *Narrative,* II, pp. 343-344; Stanton, *Great U.S. Exploring Expedition,* pp. 176-177.

53. Dana M. Wegner, "Trends in the Study of Ship Design," in Daniel M. Masterson, ed., *Naval History: The Sixth Symposium of the U.S. Naval Academy* (Wilmington, DE 1987), pp. 313-314.

54. Roger Pineau, *The Japan Expedition 1852-1855 of Commodore Matthew Calbraith Perry: An Exhibition Catalogue* (Washington: Smithsonian Institution, 1968), p. 18.

Bear of Oakland, the durable revenue cutter employed by Rear Admiral Richard E. Byrd on his more recent Antarctic explorations. As representatives of this nation's first great scientific venture, the models of *Vincennes* and her gallant consorts should ensure a more enduring memory of the United States Exploring Expedition of 1838-1842.

PHILIP K. LUNDEBERG

Curator Emeritus
Division of Armed Forces History
National Museum of American History
Smithsonian Institution

DANA M. WEGNER

Curator of Ship Models
David Taylor Research Center
Department of the Navy

Dana Wegner received his bachelor's degree at Elmhurst College in Elmhurst, Illinois and his master's in museum curatorship at the State University College of New York at Cooperstown. He has attended the Munson Institute of American Maritime History where he studied under Dr. Robert G. Albion. Mr. Wegner began his government career in 1974 as an historical researcher for Admiral Rickover in the navy's Division of Naval Reactors and was then an exhibits archivist at the U.S. National Archives. He has written numerous scholarly historical articles and has contributed to Naval History: Sixth Symposium *(1987),* The Discipline of Technology *(1990),* How the Battleship "Maine" Was Destroyed *(1976),* In Peace and War . . . *(1978), and* The American Image *(1979).*

Mr. Wegner has been the navy's Curator of Ship Models, located at the David Taylor Research Center in Bethesda, Maryland since 1980 and has been a professional model builder for twenty-five years. In his capacity as curator he oversees the display and conservation of nearly 1500 ship models, 1810 to present.

Philip K. Lundeberg is Curator Emeritus at the National Museum of American History, having served in its Division of Naval History for twenty-five years. A graduate of Duke University, he served in destroyer escorts in the Atlantic and Pacific during World War II, completing the doctorate in history under Samuel Eliot Morison at Harvard in 1954. A specialist in the history of undersea warfare, he taught naval history at Annapolis and published articles on "The German Naval Critique of the U-Boat Campaign, 1915-1918" in Military Affairs *and "Undersea Warfare and Allied Strategy in World War I" in the* Smithsonian Journal of History, *as well as contributing to successive editions of E.B. Potter's* Sea Power: A Naval History. *Active in international historical and museum affairs, he edited the United States contribution to the* Bibliographie de l'Histoire des Grandes Routes Maritimes, *published by the International Commission of Maritime History.* At the Smithsonian he participated in numerous exhibits, including naval elements of the Hall of Armed Forces History as well as "By Sea and By Land: The Yorktown Bicentennial," "Fashioned in Steel: The Centennial of the American Steel Navy," and "Magnificent Voyagers: The United States Exploring Expedition, 1838-1842." Author of* Samuel Colt's Submarine Battery *(1974) and an essay "Marine Salvage and Sea Mine Technology in the 1840's: The Taylor Connection" in Timothy J. Runyan, ed.,* Ships, Seafaring and Society *(1987), he has researched widely in the emergence of sea mine warfare. Currently he serves as consultant to the new Naval Undersea Museum at Keyport, Washington, and the Australian National Maritime Museum at Sydney.*

* Additionally, Lundeberg directed conferences of the International Commission of Military History at Washington on "La Technique Militaire" (1975) and "Soldier-Statesmen of the Age of the Enlightenment" (1982), including publication of *Acta.*

Shipping In Islamic Art: Seventh Through Sixteenth Century AD

DAVID NICOLLE

THIS article is intended to make available to specialists in the history of ship design a number of illustrated sources which are either little known, previously unpublished or perhaps presented here in a new context. Most of these sources were gathered together during the course of research into the history of Islamic arms and armour which, unlike medieval shipping, is my own field of specialization.

Various studies have, of course, been made of both historical and recent traditional Islamic shipping.[1] Yet there remains a widespread belief that very few pictorial sources survive. This may still be true, at least in comparison with illustrations of Byzantine, Western European or even Chinese shipping, but I believe that more is available than has been generally realized. Most are stereotyped, stylized, archaic, obviously drawn by "land-lubbers" or by untutored makers of graffiti. On the other hand even such illustrations have their uses. All are ultimately based on more realistic and knowledgable representations, through often at several removes. Nevertheless certain aspects of construction or equipment can be identified, some of which are quite surprising given their date or technological context. The main problem with such sources lies in interpretation, in other words being able to see through the artistic conventions or crudity of execution. It is here that comparable illustrations from other, usually contemporaneous, cultures can help and a number of such sources have been included in this survey.

Seventeen Century Ottoman Ship in Port.

1. Among some of the more recent studies are: G.F. Hourani, *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times* (Princeton 1951); E.W. Argyle, "The Ancient Dhow," *Sea Breezes* (new series) XVIII (1954); R. LeBaron Bowen "The Earliest Lateen Sail," *Mariner's Mirror* (1956), "Early Arab Ships and Rudders," *Mariner's Mirror* (1963) & "Early Arab Rudders," *Mariner's Mirror* (1966); L. Guilleux la Roërie, "The Lanteen Sail," *Mariner's Mirror* (1957); J. Muir "Early Arab Seafaring and Rudders," *Mariner's Mirror* (1965); G.R. Tibbets, *Arab Navigation in the Indian Ocean before the Coming of the Portuguese* (London 1971); C.W. Hawkins *The Dhow—An Illustrated History of the Dhow and its World* (Lymington 1977); So'ad maher, *Al bahriyah fi misr al islamiya (navigation in Islamic Egypt)* in Arabic (Jeddah 1979); W. Facey (edit.), *Oman, a seafaring nation* (Muscat 1979).

ILLUSTRATIONS

1 Petraglyph on a rock south of Hamra, near Bilad Sayt, Sultanate of Oman. Oman and neighbouring regions of the Arabian peninsula are rich in petro-

glyphs, drawings crudely "pecked" on natural rock surfaces with a stone or such hard object. Most cannot be dated and while some illustrate animals long extinct in these areas others show motor vehicles and steamships. A few apparently traditional boats also appear, which is hardly surprising given Oman's rich nautical heritage. The most that can be said about this extremely crude design is that it might show a vessel with an angled prow and stern, three masts and what could represent deck-houses or square sails. All are features to be seen elswhere in Islamic art, the angled hull form generally through not invariably being associated with Indian Ocean Shipping.

2 "Noah's Ark"; wall painting near the door of Bahwat church, *Kharga* oasis, Egypt 7th century AD. *Kharga* is not only far from the sea but is also many miles from the Nile. It is hardly the place one would look for accurate pictures of ships. Yet the artist who drew the boat which here supports a columned arch and seven figures clearly drew upon an existing early Byzantine tradition of ship illustration which may have reflected current reality. The picture was probably executed just before or shortly after the Arab-Islamic conquest and there is little reason to reason to think that the shipping of 7th century Egypt differed from that of the Byzantine Aegean heartland.

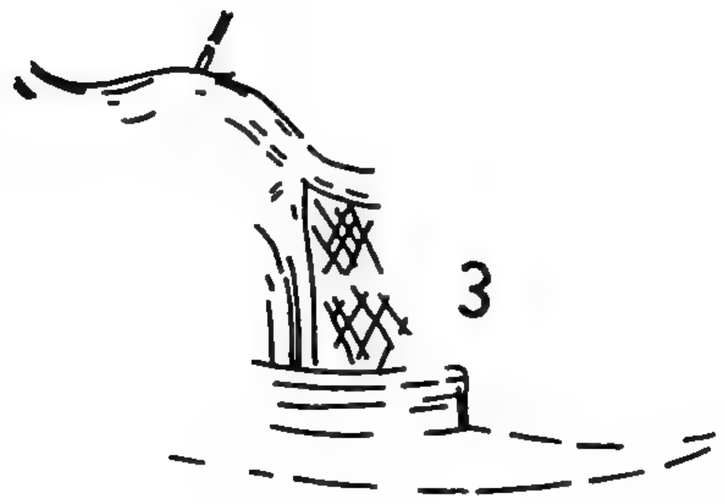
3 "Argo"; painted *Zodiac ceiling* in *caldarium* of the bath-house at Qusayr 'Amra, Jordan c. 740 AD. Like Bahwat church, the reception chambers and bath-house at Qusayr 'Amra are not the most likely places to find pictures of a ship. Yet one exists and is perhaps the earliest confirmed such source in Islamic art. Qusayr 'Amra lies deep in the eastern Jordanian desert and its amazingly well preserved paintings are an amalgamation of Syrian-"Hellenistic", more specifically Byzantine or early Christian, and Sassanian Iranian artistic traditions with a strong but rarely recognized Arab element. The Zodiac ceiling is one of the most "Hellenistic" in both subject matter and style, while the representation of "Argo" is both small and severely damaged. Yet enough remains to show a hull and probably the prow of the ship which either supports an incongrous arch as at Bahwat (figure 2) or a badly drawn blue-grey sail furled around a yard-arm which is itself attached to a sloping mast. The cross-hatched element close to the bow could conceivably indicate some form of deck structure similar in both contruction and method of artistic representation to some in later Islamic sources (figures 9a & 14a). Only fragments of the outline of what I take to be the prow remain yet the shape is clear enough. The "ram" is slightly raised but is not a true "beak." Could this slight raising indicate knowledge of the boarding beak or is it merely a variation on those conventional ship illustration which can be found in much late Classical art? It does show knowledge of the beak thus this device may already have been included in the common currency of mid-8th century ship inconography and thus could hardly rate as a new element in naval warfare.

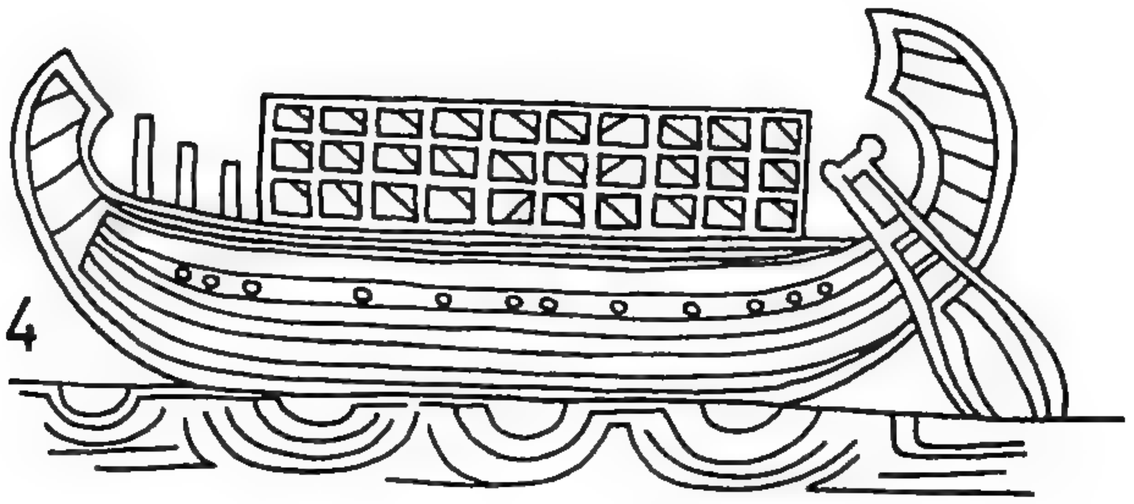
4 Mosaic on spandrel of arches at north-east corner of *sahn* (courtyard) of the Great Mosque, Damascus, Syria 706-715 AD. One of the smaller areas of surviving mosaic in the Great Mosque includes a clear representation of a ship. The quality of workmanship is good but stiff and more stylized than the better-known *Barada Panel* and other mosaics around the western entrance. This might indicate that it dates from one of various later restorations, perhaps even that undertaken for Sultan Baybars in the mid-13th century. But it should also be pointed out that Umayyad mosaics in a stiff style, stemming from a Sassanian-Iranian rather than Syro-Byzantine tradition, also survive on the soffits of arches at the western end of the *sahn* and in the Dome of the Rock, Jerusalem. Even if this piece of mosaic does date from a later century, the restorers could well have been repairing an existing illustration, particularly as the ship has much in common with those at Bahwat and in other early sources associated with the Byzantine artistic tradition (figures 7, 31, 36, 39 & 40). Details such as the steering oar, deck-house (perhaps from Judeo-Christian iconography of *Noah's Ark*), bollards near the prow and what might be the ends of cross-members or oar-ports ranged along the hull, give even greater importance to this otherwise neglected source.

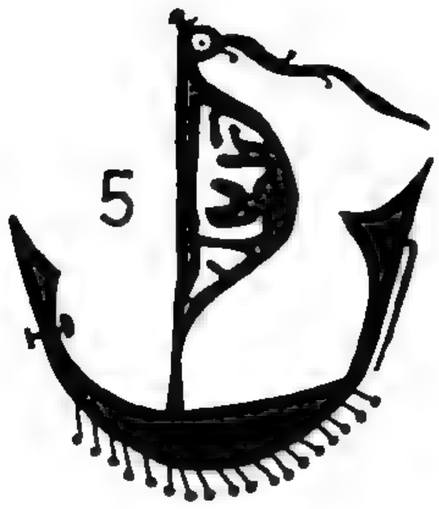
5 Ceramic plate from Nishapur, Iran 9th century AD. Once again an interesting early Islamic illustration of a ship comes from a place far from the sea. It is clearly very stylized yet some interesting features may be noted and these must ultimately have been based on reality, perhaps on vessels of the Arabian Gulf though India and even the Cas-

1

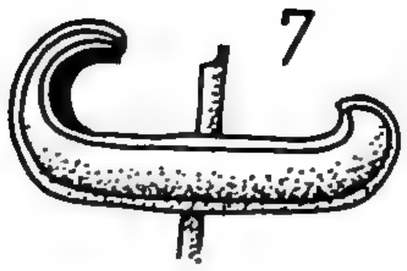
2

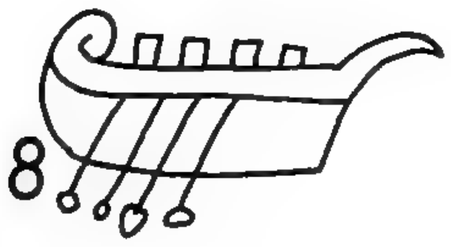

3


4


5

6


7


8

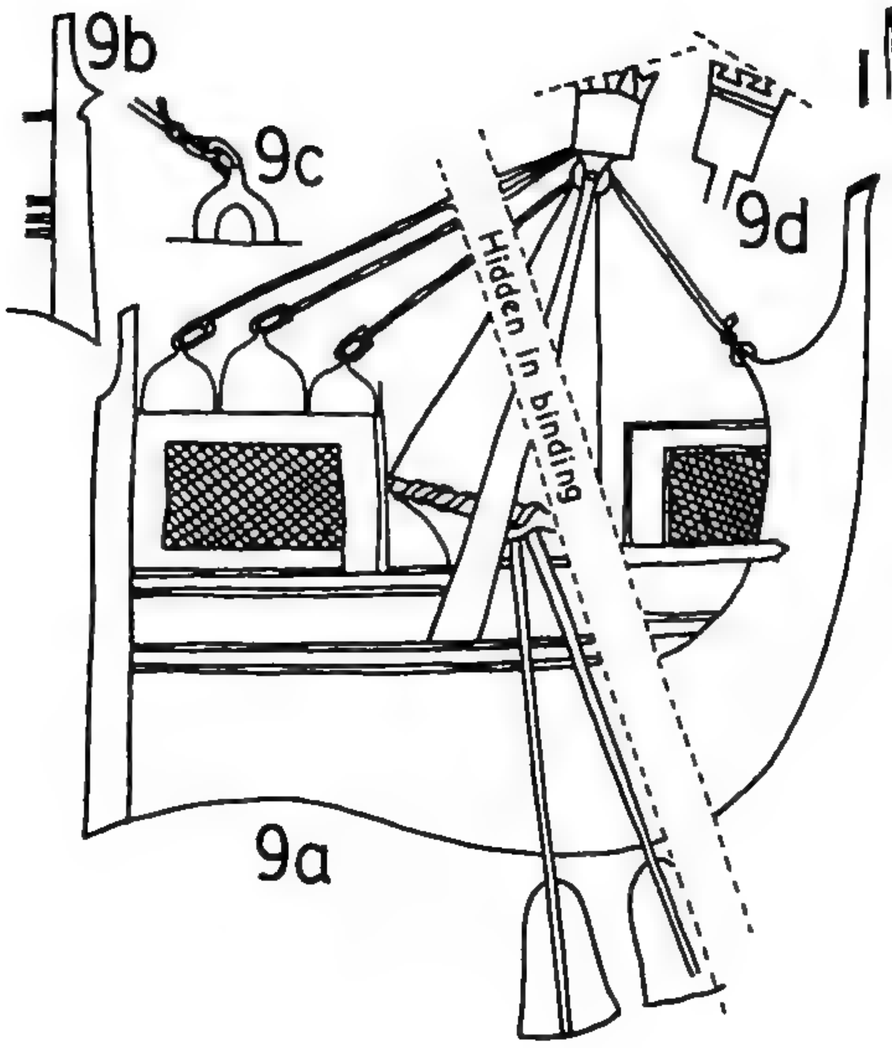
pian Sea cannot be ruled out. The sail is not a lateen. Other early sources reflecting Gulf and Indian Ocean shipping generally show rectangular rather than triangular sails (figures 10, 24A & 34). The vessel is a galley, though its hull, mast and sails need not all have originated in the same "reality." It has a high flared stem and stern (see also figures 11, 13, 17, 18, 22, 26 & 30) to which tantalizing details have been added. The sail would indicate that this vessel is travelling from left to right. Most, though by no means all, early medieval sources portray a galley's oars at the end of their stroke. If this is also the case here, then the vertical line outside the supposed sternpost could be the earliest yet-known representation of a hinged rudder (see figures 9, 14, 15, 20, 23 & 24). On the other hand it is more likely that the projections on the left end of the ship are a steering oar.

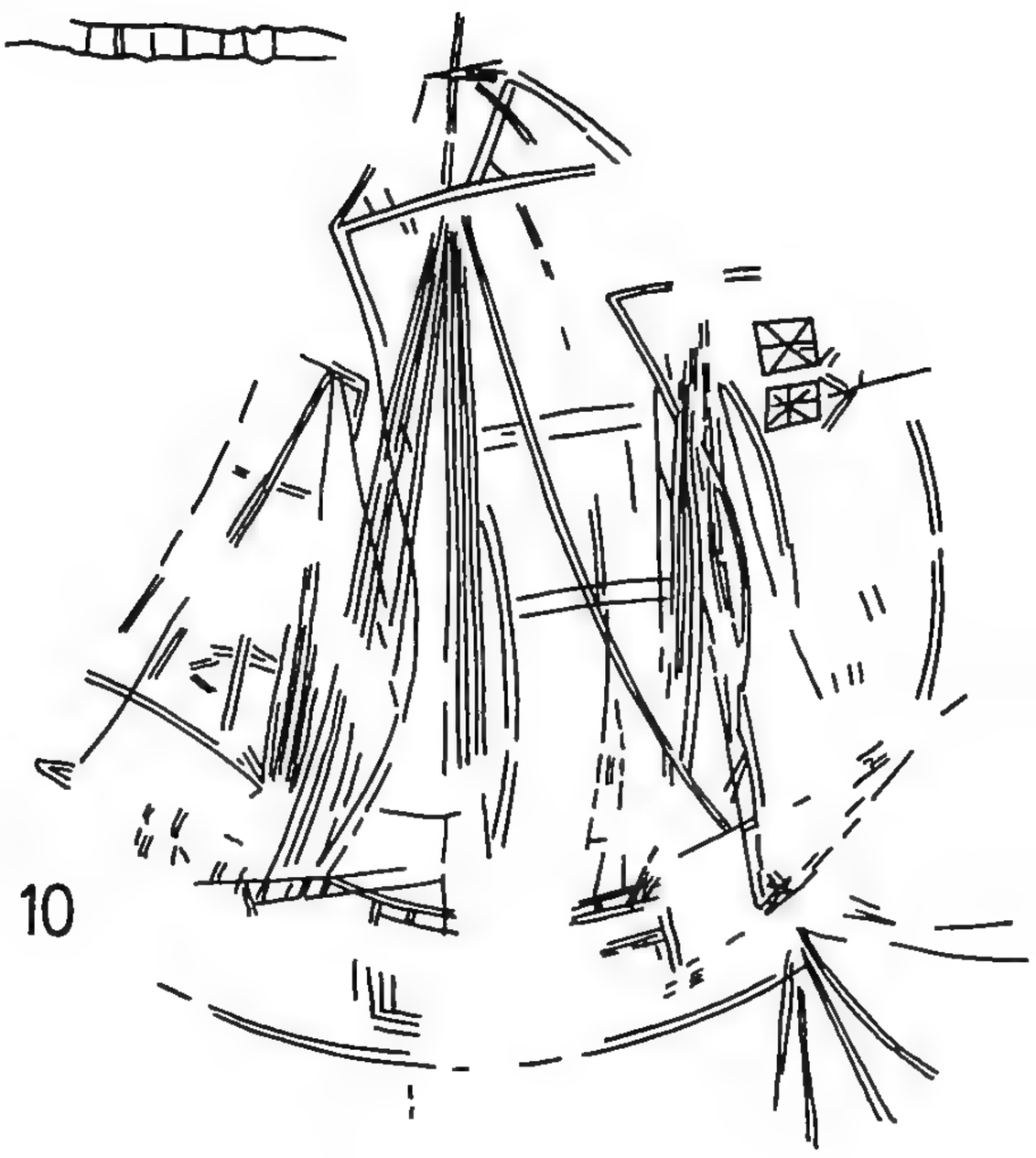
6 Lustre-ware dish, Egypt 9th-10th centuries AD. Equally stylized though far more detailed is this better-known boat on a ceramic from Egypt. The pyramidal shape above the hull probably illustrates a lanteen sail made of relatively small pieces of fabric, a system of construction similarly portrayed in Greek, Roman and early medieval Scandinavian sources. Once again the vessel is a galley, with flags flying and anchors fore and aft. The stem and stern have what might be decorative lines from "keel" to "deck," a feature widely reflected elsewhere (figures 4, 11, 13(?), 15, 22, 23, 24a & c, 26, 27). The habit of giving the hull a crosshatched surface will also become quite common and surely had nothing to do with any known system of construction (figures 26, 28, 29, 48, 57a, 62 & 67).

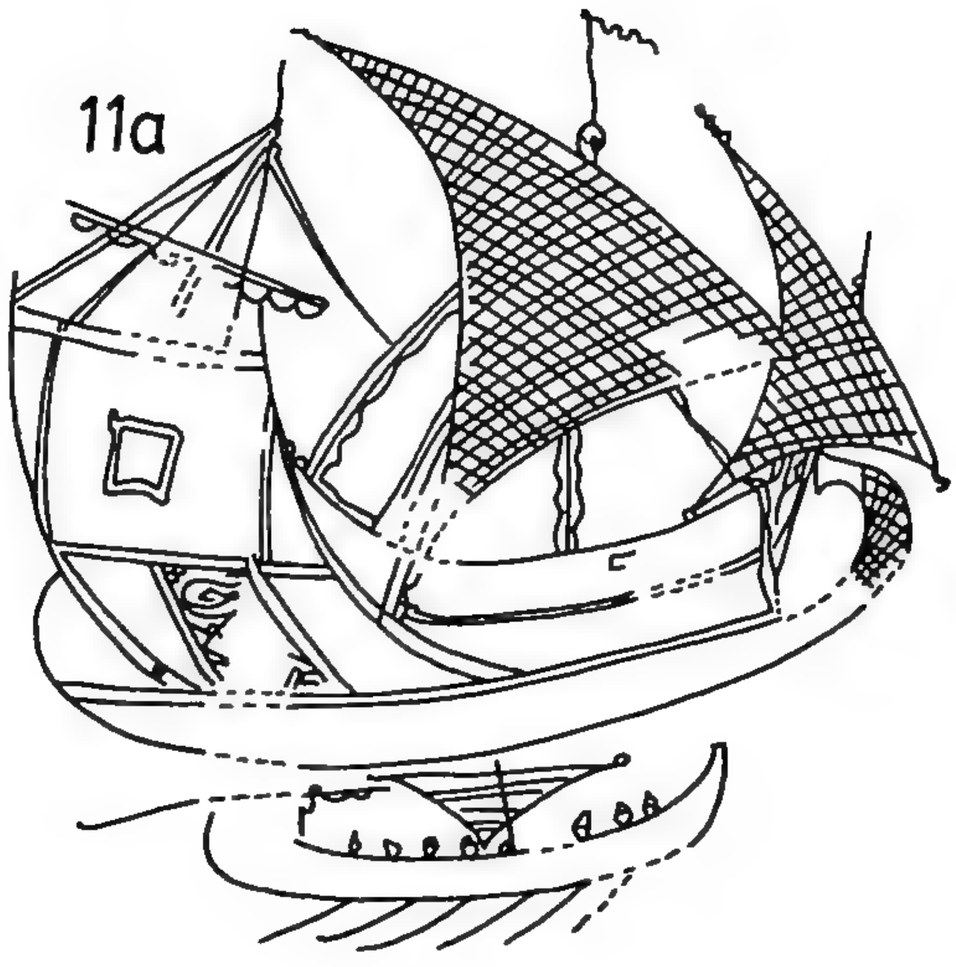
7 Boat-shaped finial on minaret of the Ibn Tulun Mosque, Cairo (from an early 19th century illustration). This open bronze vessel, which collapsed in the mid-19th century, is believed to have dated from the foundation of the Ibn Tulun Mosque in 879 AD. Like a surviving "boat" finial on the Mausoleum of Imam al Shaf'i in Cairo, it was used as a container for grain to feed the birds. The Minaret of the Ibn Tulun Mosque was, however, completely rebuilt at the start of the 14th century by the *amir* Lajin. The dome supporting the other "boat" final on the early century Mausoleum of Imam Shaf'i was similarly rebuilt in 1772 so the dating of both these ships is problematical. Yet the similarity between the Ibn Tulun example and other early medieval illustrations is obvious (figures 2, 4, 11, 17 & 26).

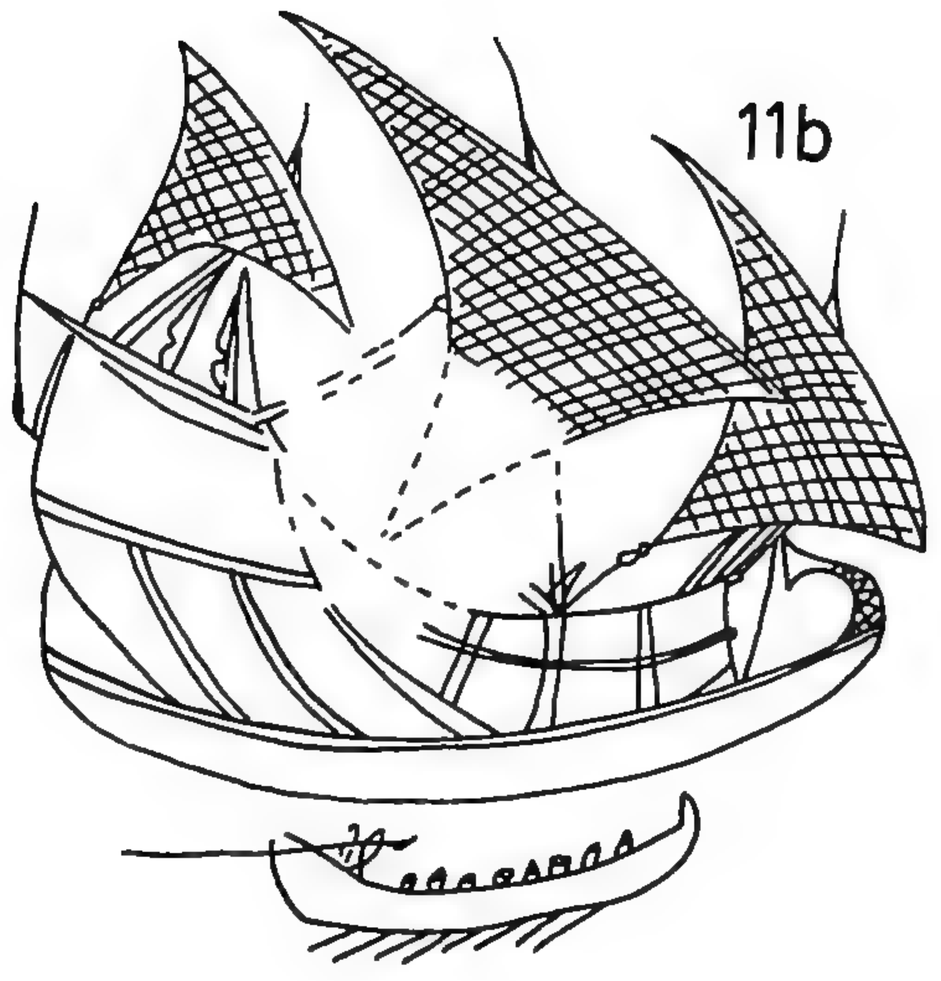
8 Galley in illustration of "The Second Trumpet," *Beatus Commentaries on the Apocalypse*, Iberia 922-952 AD (Pierpont Morgan Lib., Ms. 644, f. 137f, New York). Only three points need to be noted in this tiny and highly stylized drawing from a 10th century Mozarab (Iberian Christian within the Andalusian Muslim cultural milieu) manuscript. These are the possible existance of a raised beak instead of a waterline ram, the straight stem combined with a curved stern and the fact that the latter continues to form a high decorative poop. Similar hull forms may be shown in various other sources (figures 25, 26(?), 32, 43b(?), 45, 46, 51, 56c, 67b, 71a, 72a-c & 76).

9 "Argo" in *Suwar al kawakib (Book of Fixed Stars)* by Al Sufi, 1009/10 AD (Bodleian Lib., Ms. Marsh 144, pp. 365-6 & 367-8, Oxford). The Bodeian *Book of Fixed Stars* is not only the earliest surviving copy of this text but is also regarded as the oldest complete illustrated Arab-Islamic manuscript. It is generally believed to have been made in Iraq or western Iran although some scholars think it more likely to have originated in Egypt. In either case the illustrations of "Argo" Probably reflect Indian Ocean (including Gulf and Red Sea) shipping rather than that of the Mediterranean. This judgement is based on the evidence of the drawings themselves which, like all illustrations in such books, come in mirror-image pairs based on star patterns. The stars have been left out here. Though mirror-images, the two ships are not quite identical, figures 9b to 9e picking out minor differences in stern-post, shrouds, crow's nest and sail. The latter is probably a lanteen and there appear to be two deck-houses. That at the stern supports three domes which are probably incongruous although comparable domes seem to appear not only in later Islamic sources (figures 23, 24a, 56a, & c) but also on an otherwise very realistic Portuguese map (figures 80a & b). However, potentially the most interesting features are the two slightly different stern-posts. Could these indicate hinged stern-rudders? The drawings may not be conclusive but their similarity with clearer, though still stylized, al Sufi manuscripts as well as other sources (figures 14, 15, 20, 23 & 24a) could push back the history of the stern-rudder by several centuries. It should also be


9b
9c
9d
9e
Hidden in binding
9a


10


11a


11b

noted that the large oars amidships are present in all *Books of Stars*, their presence being dictated by the star-patterns on which drawings of "Argo" are based.

10 Graffito of a ship, *in situ* Siraf, Iran possibly 11th century (after article in *Iran* VI 1968). The dating of this damaged but remarkably detailed graffito, found during excavations at the major medieval Gulf port of Siraf, is not certain but is based on the strong evidence of its archaeological context.[2] The ship has a slightly curved keel, probably a curved stem, perhaps a deck-house at the stern and three vertical masts supporting basically rectangular sails plus perhaps a trapezoid topsail. Similarities with the famous late 6th century AD Indian wall-painting at Ajanta (figure 34) are unmistakable and may even extend to a platform-like structure hanging over the stern. At one time it was assumed that most medieval Gulf and Indian Ocean craft had straight stem and stern-posts but an increasing body of pictorial evidence now suggests that this was not necessarily the case. The abundance of ropes hanging from the prow also finds an interesting parallel in a recently discovered fragmentary drawing from Egypt (figure 28), although in this latter incomplete drawing it is impossible to be sure whether the ropes hang from the prow or stern.

11 Tin-glaze Islamic ceramic bowls from church of S. Piero a Grado, Pisa, 11th century (Museo Nazionale di S. Matteo, Pisa). Again we are presented with a pair of almost identical ships. These are found on two shallow bowls which were used as *bacini* (ceramics inserted into the fabric of a building as surface decoration). They were almost certainly made in the Balearics during the 11th century at a time when these islands formed part of the flourishing, marine-oriented Islamic *taifa* kingdom of Denia. The Balearics had, of course, been under Muslim rule since the start of the 10th century having been raided for the previous hundred years. The ships themselves are fully within a medieval Mediterranean tradition of lateen sailed, two or three-masted "round ships" with high stern-castles. This is well illustrated in many sources from Italy and Christian Iberia. It is also represented in Greece (figure 41). However, the main importance of these two bowls lies in their date and provenance. They are earlier than previously known pictures of such vessels and they are Islamic. Both factors support the theory that large multi-masted merchant craft never disappeared from the early medieval mediterranean and that Islamic shipping in this area was, not surprisingly, within the same tradition as that of the Christian Mediterranean. Current researches into the history of medieval Islamic technology is further strengthing the view that Islam was, for many centuries, the major inovator.[3] This may also have applied to shop design and methods of construction, in which case those specifically medieval features which distinguished the medieval Mediterranean "round ship" from its two masted Roman predecessor, the *corbita,* may have been a shared Byzantine and Islamic development. The smaller boats in the forground are also worth noting.

12 Fragment of a lustre-ware bowl from church of S. Andrea, Pisa 1100-1125 AD (Museo Nazionale di S. Matteo, Pisa). This bowl also served as a *bacini* and is believed to have been made in Andalusia (Muslim Iberia). Though only part now remains it clearly illustrated a ship with at least two masts, almost certainly lateen sails and probably a "round" hull. The unidentified object on the far right might be part of a man operating a steering oar.

13 Ceramic bowl from church of S. Michele degli Scalzi, Pisa 1175-1200 AD (Museo Nazionale di S. Matteo, Pisa). A final and slightly later *bacini* of Islamic origin also illustrates a ship and is believed to have come from Ifriqiya (roughly corresponding to modern Tunisia). The ship is a much smaller, single-masted vessel and is more crudely portrayed. Any artistic decline is largely explained by the 11th and 12th century history of Tunisia but these tumultuous years could also have led to the relative decline of large multi-masted North African vessels, although they clearly continued to be used in the eastern Mediterranean.

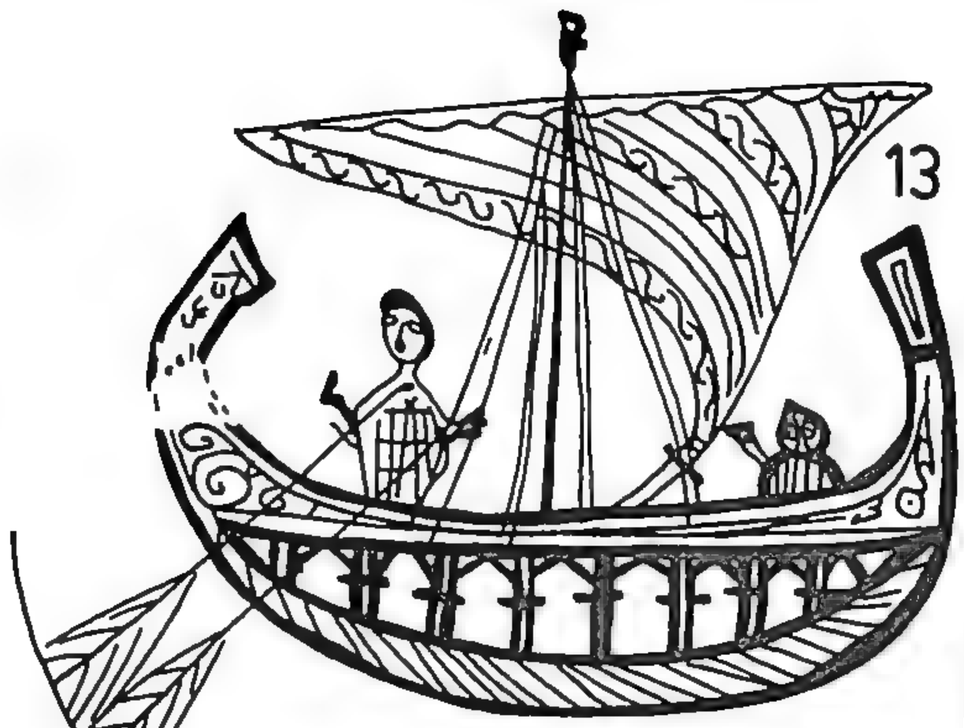
14 "Argo" in *Suwar al Kawakib (Book of Fixed Stars)* by al Sufi, from Mardin 1134/5 AD (Topkapi Lib., Ms. Faith 3422, ff. 198r & 198V, Istanbul).

2. Dr. John Pryor suggests, however, that the form of this ship makes a 17th or 18th century date more likely.

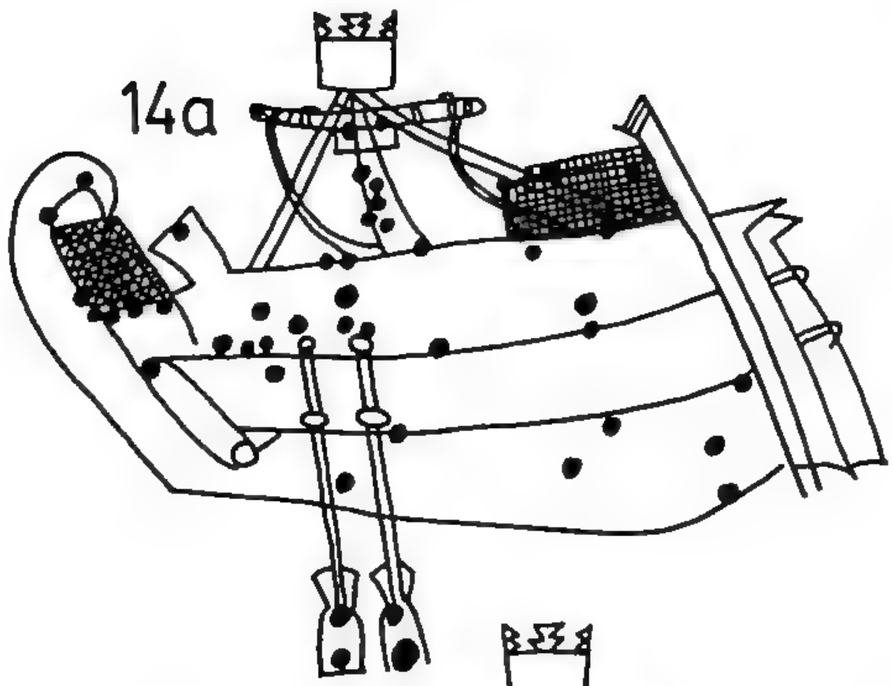
3. A.Y. al Hassan & D.R. Hill *Islamic Technology, an Illustrated history* (Cambridge 1986) pp. 31-34 & passim.

12

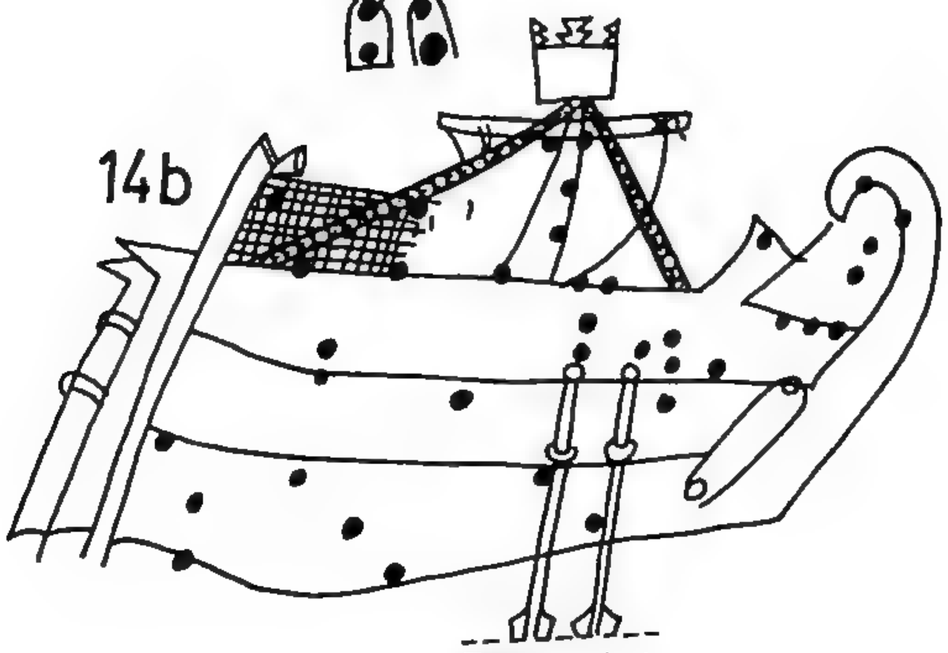
13



14a

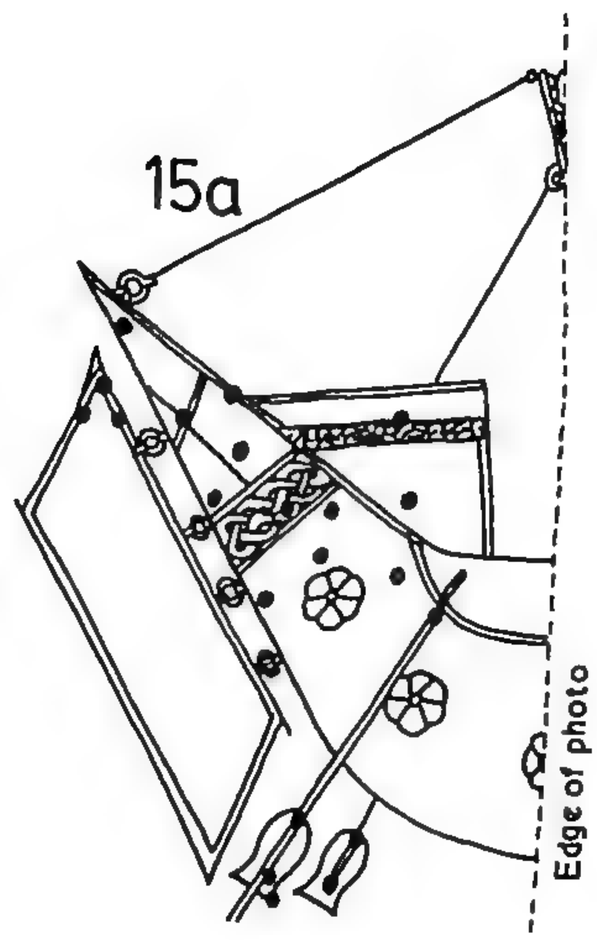


14b



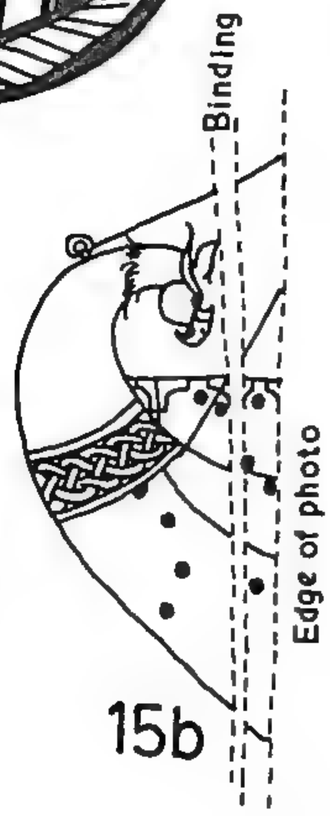
Edge of photo

15a



Edge of photo

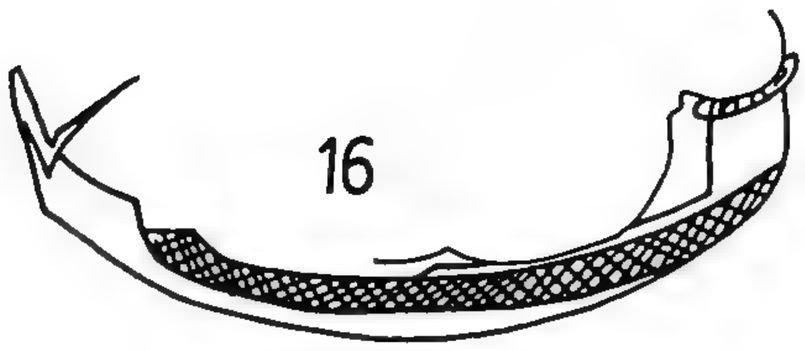
Binding



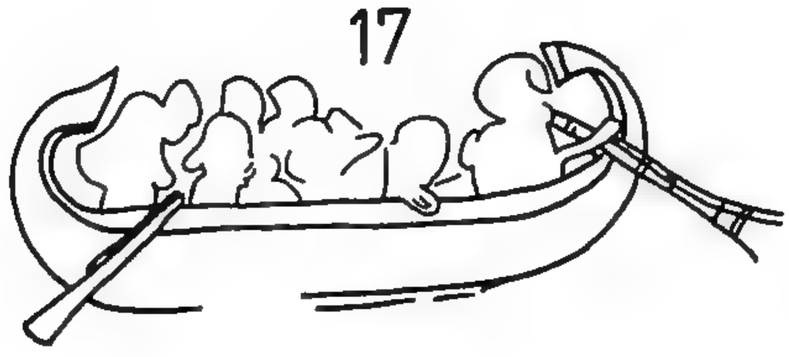
Edge of photo

15b

16



17



This is surely one of the earliest yet known unmistakable representation of a stern-rudder and it predates the famous Winchester Cathedral font by half a century. The city of Mardin is, of course, far from the sea, lying in the Jazira region (ancient Mesopotamia) close to the south-eastern edge of the Anatolian plateau. In early medieval times this was a densely populated, urbanized and rich area at the very crossroads of Middle Eastern commerce. Mardin itself was midway between the Tigris and Euphrates rivers, both of which served as vital arteries of trade leading to the Arabian Gulf and Indian Ocean. Consequently the existence of relatively accurate drawings of up-to-date ships, probably of the Gulf and Indian Ocean type, should come as no surprise (figures 23, 424a & c, 28 & 29). The vessels, which are again almost identical mirror images, also have essentially straight stems though with decoratively curved tops, single masts supporting what are probably rectangular sails and crows' nests, plus deck-houses of apparently flimsy material such as matting. Again the presence of oars amidships is probably an anachronism dictated by the basic star pattern around which the ships are drawn.

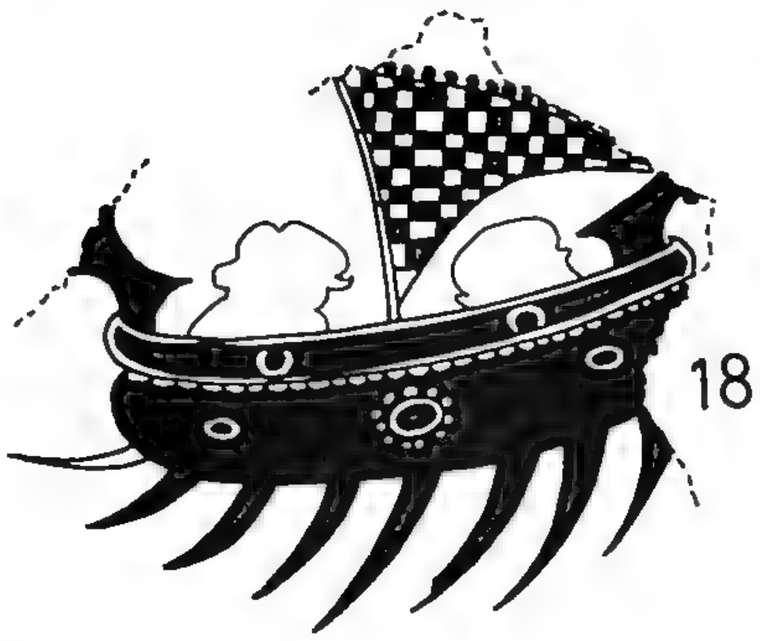
15 "Argo" in *Suwar al Kawakib (Book of Fixed Stars)* by al Sufi, probably from Egypt 1130/1 AD (Topkapi Lib., Ms. Ahmad III 3498, ff. 130v. & 131v, Istanbul). Though marginally earlier than the manuscript from Mardin (figure 14), this example of a *Book of Fixed Stars* is artistically superior but further removed from reality. In fact one gets the impression that the artist relied on verbal descriptions rather than basing his drawing on a source which reflected a real ship. Yet what he shows is surely a curious form of stern rudder. If this manuscript does, in fact, come from late Fatimid Egypt rather than Iraq, as some scholars suggest, then perhaps the artist was familar with the iconography and even reality of Mediterranean shipping while having little knowledge of Red Sea vessels which would presumably have been within an Indian Ocean-Arabian Gulf tradition. His ships have what are believed to be a curved prow (figure 15b) and a stern-post which may actually represent a curved stern artistically straightened to allow the attachment of a rudder. The latter being based on verbal reports. It is also worth noting that the two obligatory oars are here shown as relatively realistic steering oars.

16 Detail from lustre-ware plate, Egypt 12-13th century (Museum of Islamic Art, Cairo). This vessel supports a reclining figure of relatively gigantic proportions. It is probably based on a river boat, in this case from the Nile or Delta marshes, rather than a sea-going ship (see figures 24b & 30). All such craft could have been constructed partially of reeds and sealed with bitumen, leather or cloth, a system dating back thousands of years in both Egypt and Iraq and which survived in the latter area well into modern times.

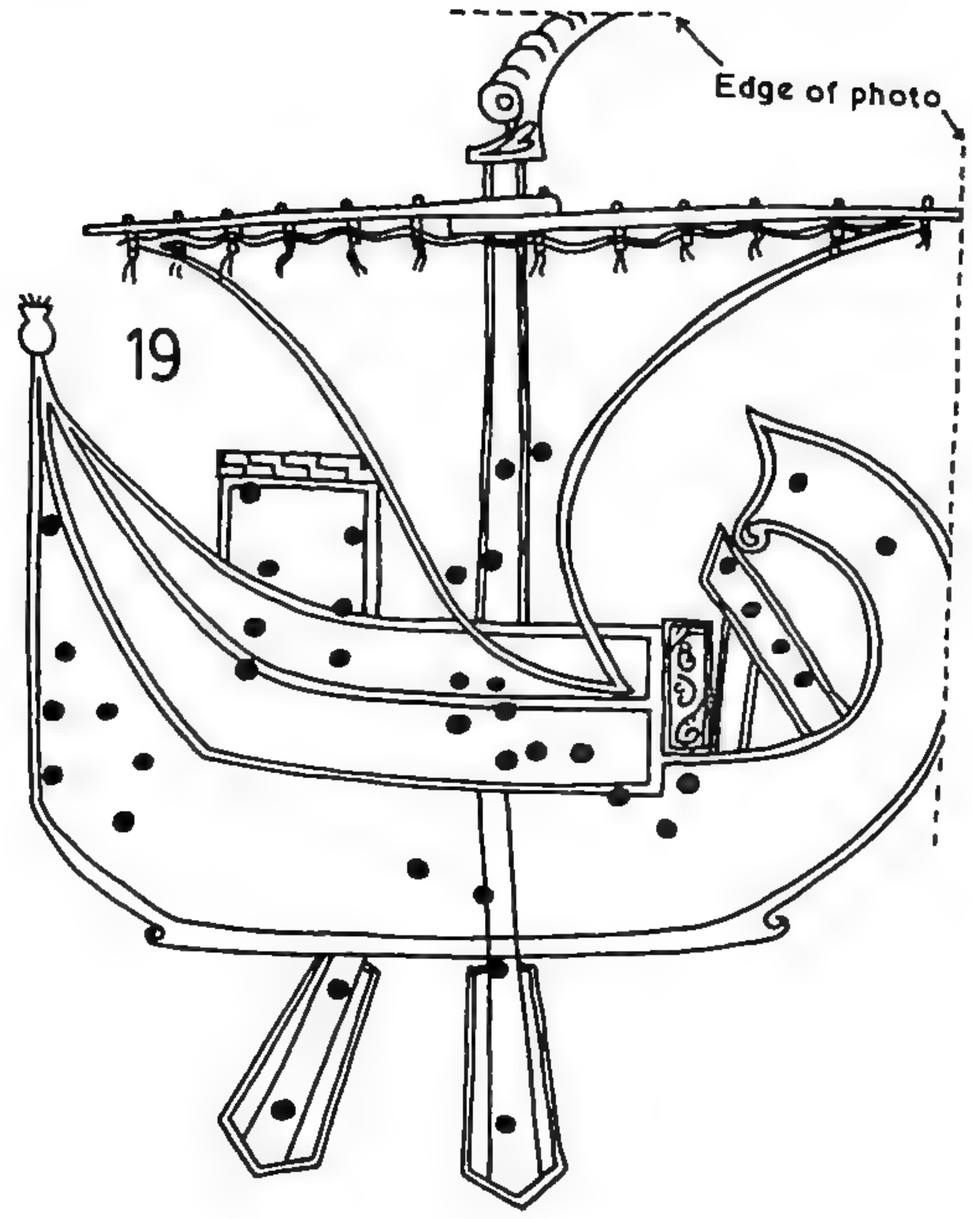
17 "Christ stilling the waves" in a *Coptic Gospel* from Dumyat (Damietta), Egypt 1179/80 AD (Bib. Nat., Ms. Copt 13, f. 21v, Paris). Any manuscript made in Dumyat, be it Muslim or as here Coptic Egyptian, is likely to reflect reality when it came to ship illustration. Dumyat was a major seaport and even today can seem like an island surrounded by river and marsh. The boat shown here with a high curving bow and stern is clearly within the same Mediterranean or Byzantine tradition as seen both earlier and later (figures 2, 4, 7, 10, 13, 18, 22 & 25).

18 Fragment of polychrome ceramic, probably from Egypt or Syria 13th century (Museum of Islamic Art, inv. 5379/25, Cairo). This style of ceramic originated in 12th and 13th century Iran but was also subsequently made in Saljuq Anatolia and Ayyubid-Mamluk Egypt and Syria. The products of these later centres were generally of inferior quality but did include some new designs such as this stylized ship. The vessel is an oared galley with a lateen sail, having high curved and decoratively flared stem and stern. All are features associated with Mediterranean boats rather than with the Gulf-Indian Ocean shipping one would expect to find on Iranian ceramics.

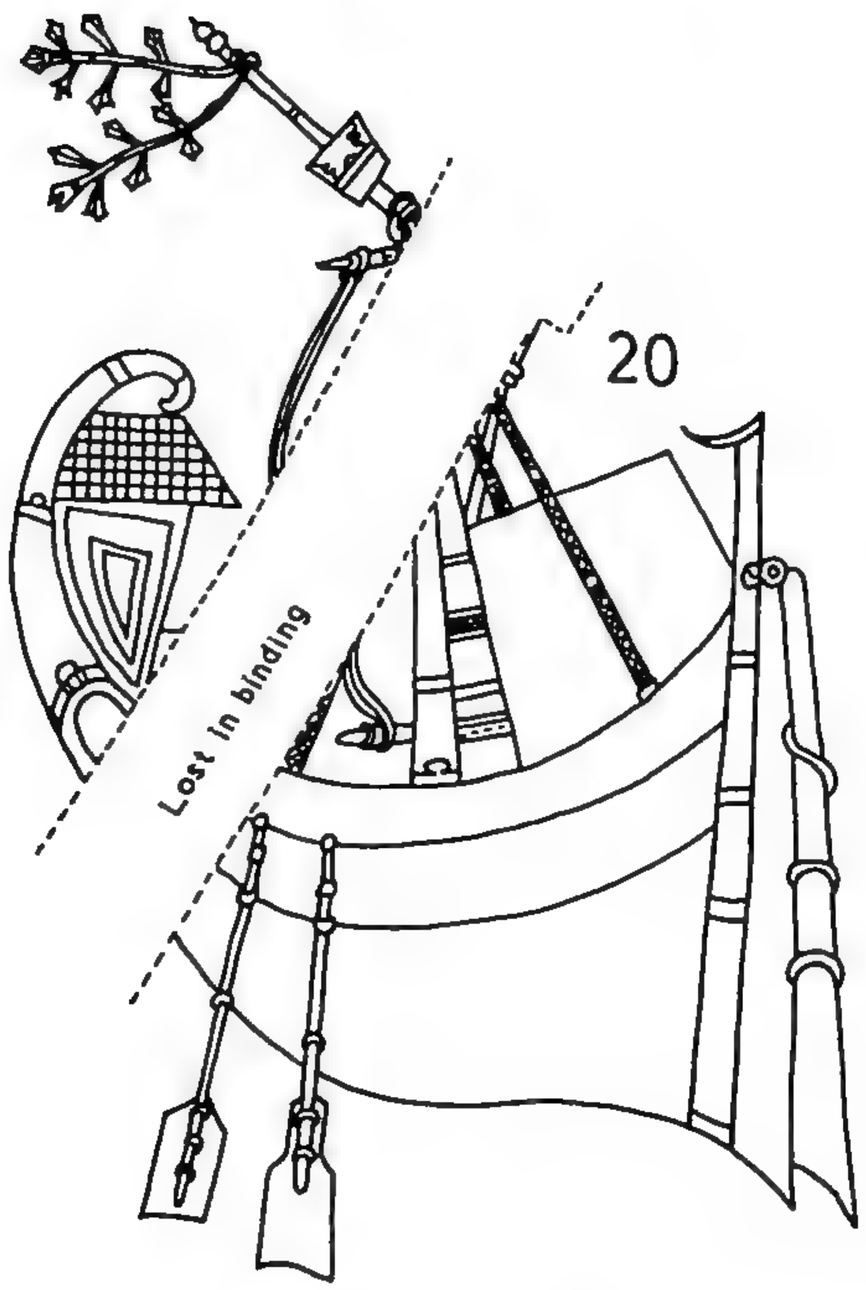
19 "Argo" in *Suwar al Kawakib (Book of Stars)* by al Sufi, from Sabta (Ceuta), Morocco 1224 AD (Vatican Lib, Ms. Ross 1033, Rome). This neglected manuscript contains a perhaps unique, though obviously highly styilized, illustration of a vessel of the type in which medieval Muslim sailors may well have plied the Atlantic—or at least that ocean's coast from southern Morocco to the Bay of Biscay. Its inconography is, of course, based on Islamic *Books of Stars* from further east, yet the illustration of "Argo" also includes interesting if not particularly distinctive features. Assuming that the deck-house is in the rear, the ship has the

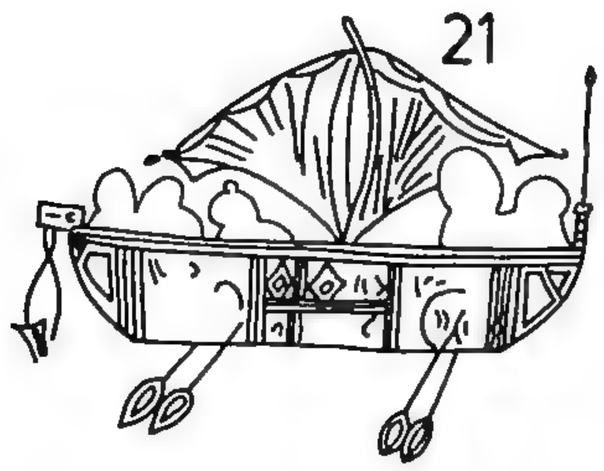


18

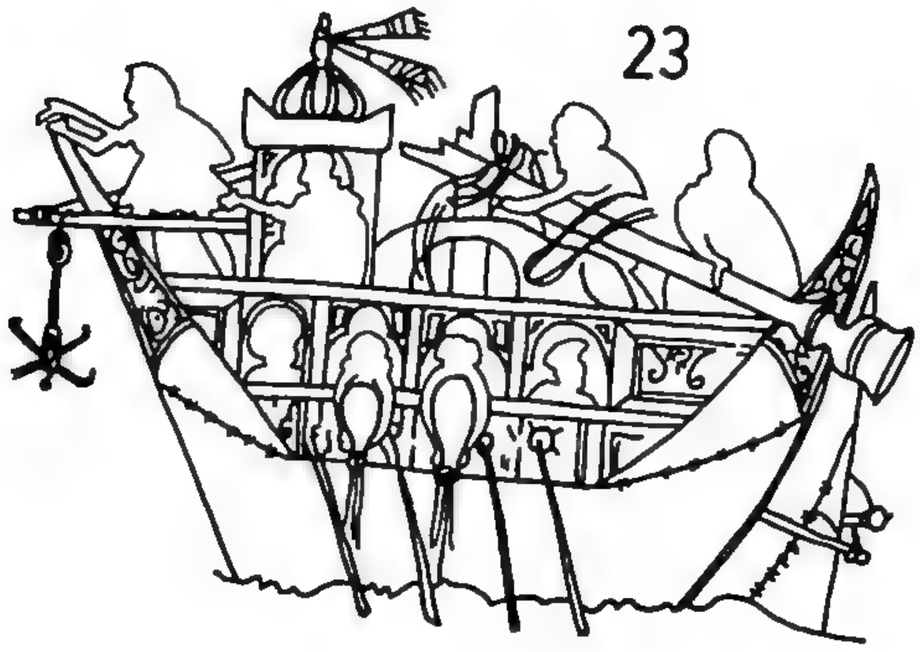


19

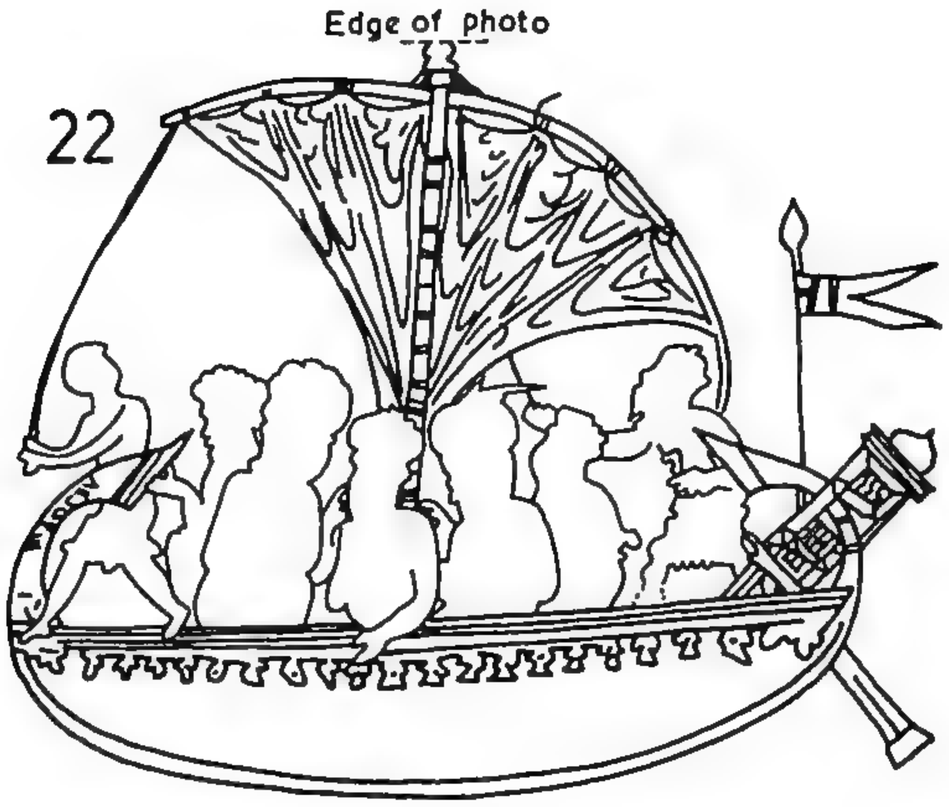




21



23



22

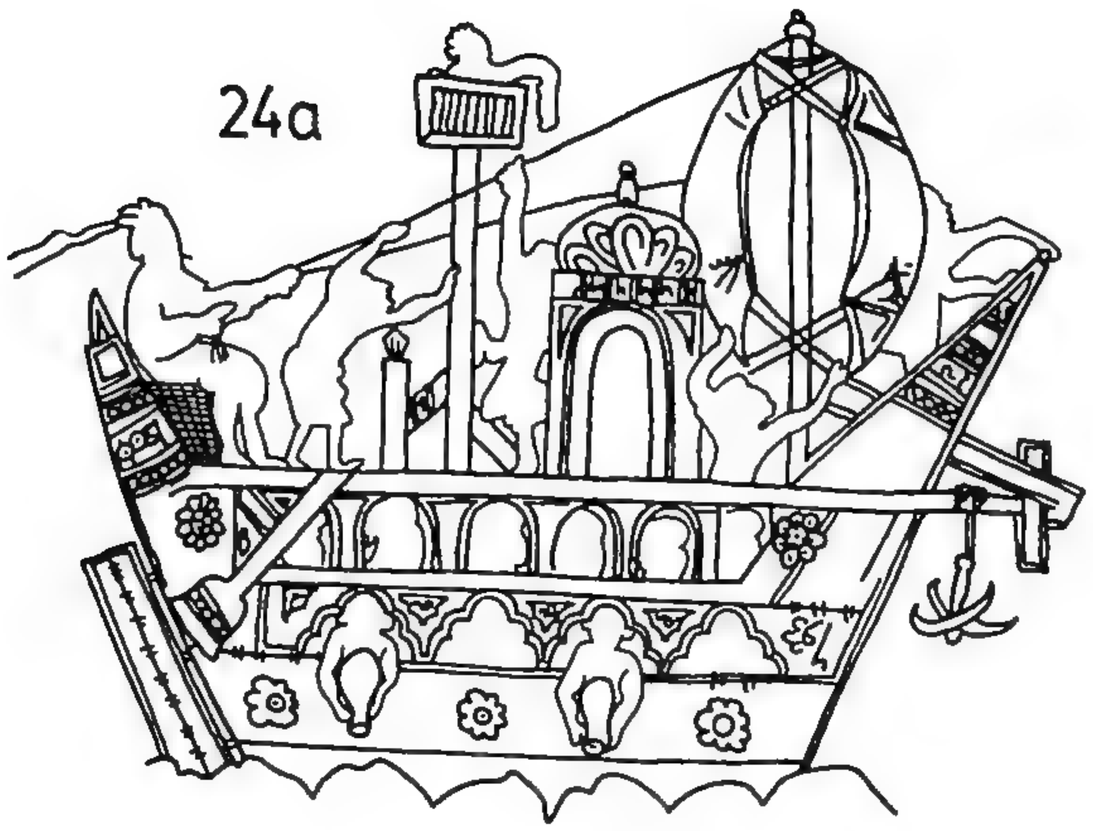
usual curved prow and straight stern, a lateen sail and buwarks which, starting some way behind the exposed foredeck (see figures 10, 11 & 14), appear to sweep up at the stern in a manner comparable to that seen in 12th and 13th century Christian Mediterranean sources. The oars are again a convention based on the star-pattern and, with the exception of one unique feature, one might regard this as an exceptionally stylized drawing of a standard early 13th century merchantman. The exception lies in the keel, or rather at its ends both of which appear to be extened. These could be dismissed as mere artistic decoration were it not for the fact that exactly the same feature is found on a recently discovered drawing from the medieval Egyptian Red Sea port of Qusayr. Could they perhaps represent protective extentions to the keel at a time when vessels were normally beached rather than docked? Ceuta is tidal whereas the Mediteranean is not. Nor, of course, is the Red Sea but the Qusayr ship may reflect features seen in the neighbouring tidal Gulf of Aden. It should also be remembered that Ceuta was the main commercial and naval port on the southern side of the Straits of Gibraltar, its powerful fleet playing a major role in the maintainance of Muslim communications between Morocco and Andalusia during the 13th and 14th centuries.

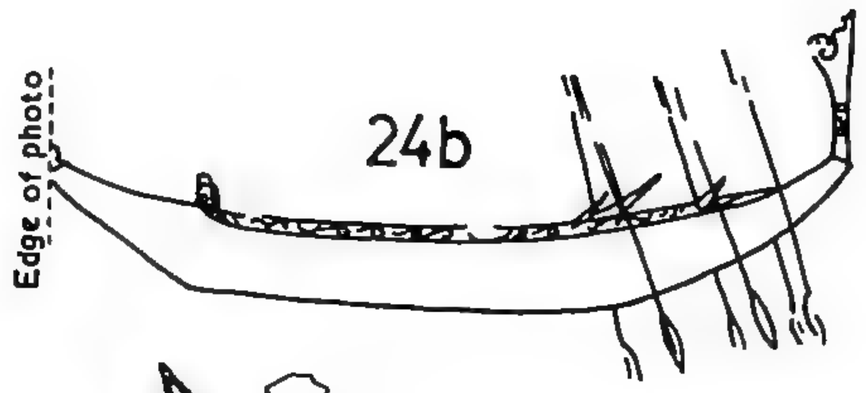
20 "Argo" from a Latin translation of al Sufi's *Suwar al Kawakib (Book of Fixed Stars)*, Sicily 1220-50 AD (Bib. de l'Arsenal, Ms. 1036, Paris). This manuscript is not merely a translation of the Arabic *Suwar al Kawakib*. It also contains relatively faithful copies of illustrations in Islamic style. Nor should it be forgotten that 13th century Sicily retained a Muslim minority, enjoyed close commercial and political connections with the Islamic world and almost certainly still had many Arabic manuscripts in its libraries. Everything points to this particular drawing being a "first-generation" copy. Unfortunately a large part of "Argo" has been hidden in a more recent binding, yet it also seems clear that the copyist was reproducing a ship which, at least for him, bore little relation to reality. The very fact that he seems not to have understood the workings of what is clearly a stern-rudder suggests that such a feature was unknown in Sicily, an island which of course had a strong maritime orientation.

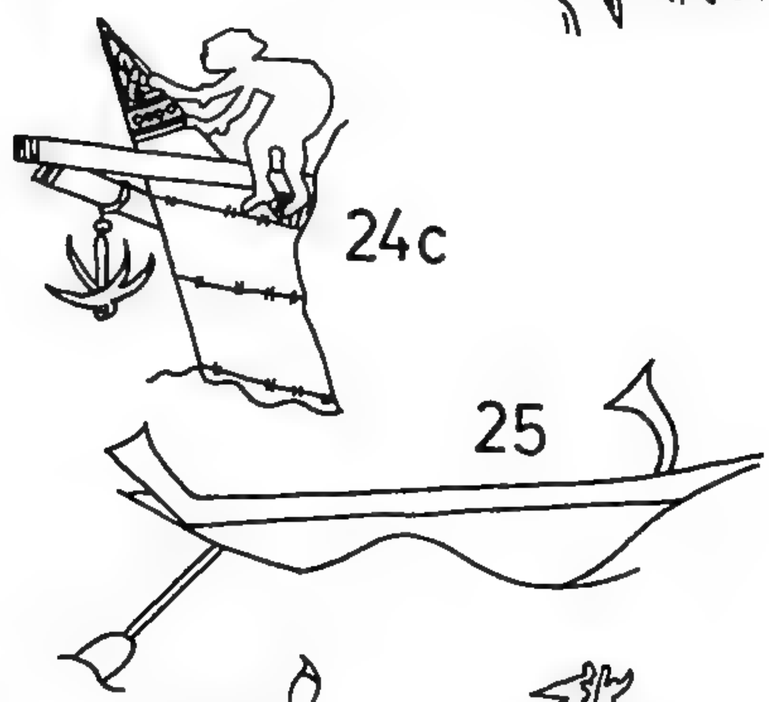
21 Detail from the isolated frontespiece of an Islamic manuscript, northern Iraq early 13th century (Hans P. Kraus priv. coll., New York). The boat illustrated here finds few parallels in other sources. The mast and sail (or sails?) are similar to those in a closely dated *Maqamat* manuscript from neighbouring Syria (figure 22). But the Iraqi-Jazira boat's hull has a straight keel with a slightly curved stem and stern, neither of which rise much above the bulwarks. The two pairs of oars appear to be for rowing rather than steering. Meanwhile strange patterns on the hull make this vessel look almost like a hide-covered Celtic *curragh*. If any reality is reflected in this little illustration it is likely to be that of a Tigris river craft.

22 Illustration from a *Maqamat of al Hariri*, probably Syria 1222 AD (Bib. Nat., Ms. Arabe 6094, Paris). A number of illustrated *Maqamat* manuscripts survive and most contain pictures of the ships which feature in a humerous text. Marine-historical interests has focussed on two copies which show sewn-boats (figures 23 & 24) to the virtual exclusion of other *Maqamat* ships. This particular example is, however, regarded as the oldest copy and its artistic style suggest a Syrian place of origin. Consequently it is not surprising to find a ship with a lateen sail and a curved hull having dramatically upswept and flared stem and stern-posts. The vessel may be stylized but it rests firmly within a long-established mediterranean tradition, even to the extent of having a steering oar rather than a stern-rudder. A problem is, however, posed by a peculiar structure at the stern. This frame-like object clearly goes around the stern-post and might be related to the steering oar. It might also be noted that in the earliest north European illustrations of stern-rudders, tillers go to one side of the stern-post. On the Winchester font, the earliest of them all, the rudder is fastened to a curved hull, perhaps even being slightly to one side of a curving stern-post, although such features have generally been attributed to the sculptor's ignorance.

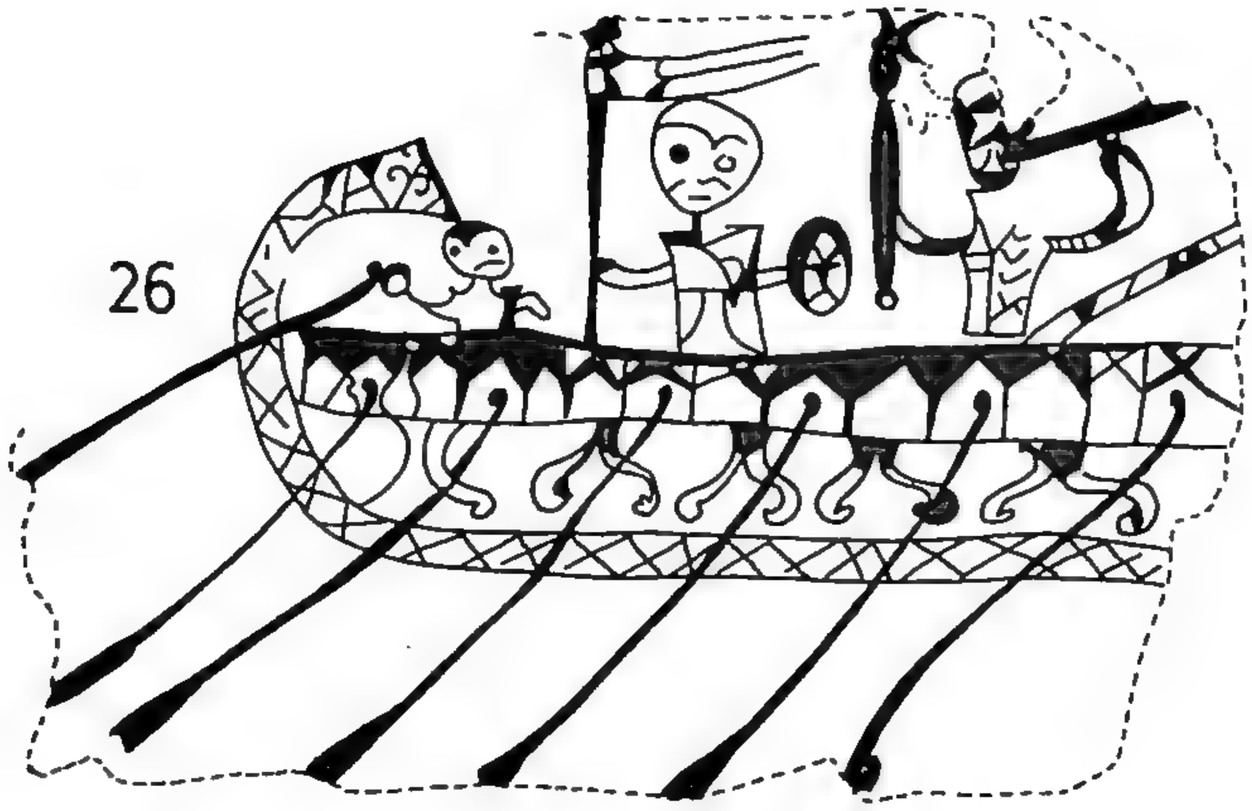
23 "Ship with a broken mast" from a *Maqamat of al Hariri*, Iraq or Jazira region 1225-1235 AD (Library of the Acad. of Sciences, Ms. S23, Leningrad). This relatively well-known illustration includes various distinctive characteristics associated with Gulf, Indian Ocean and Red Sea shipping. The most striking is, of course, the "stitched" hull construction which has been

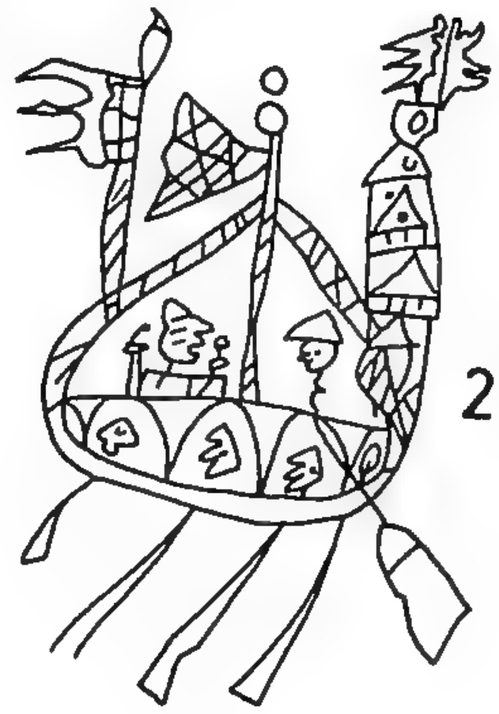

24a

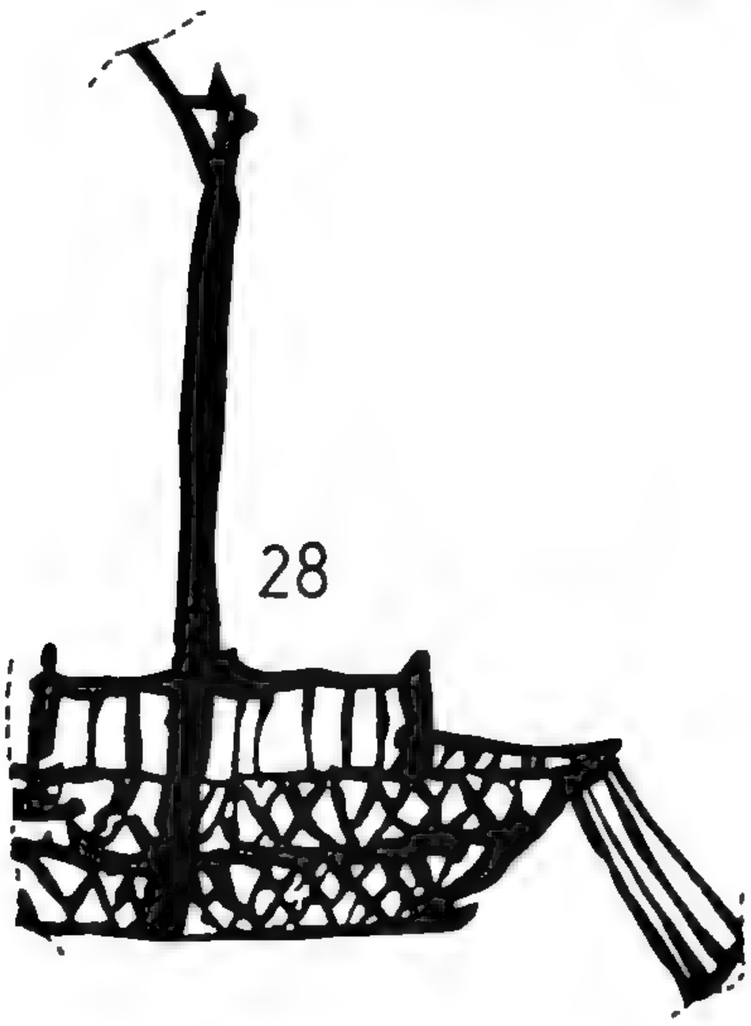

Edge of photo
24b

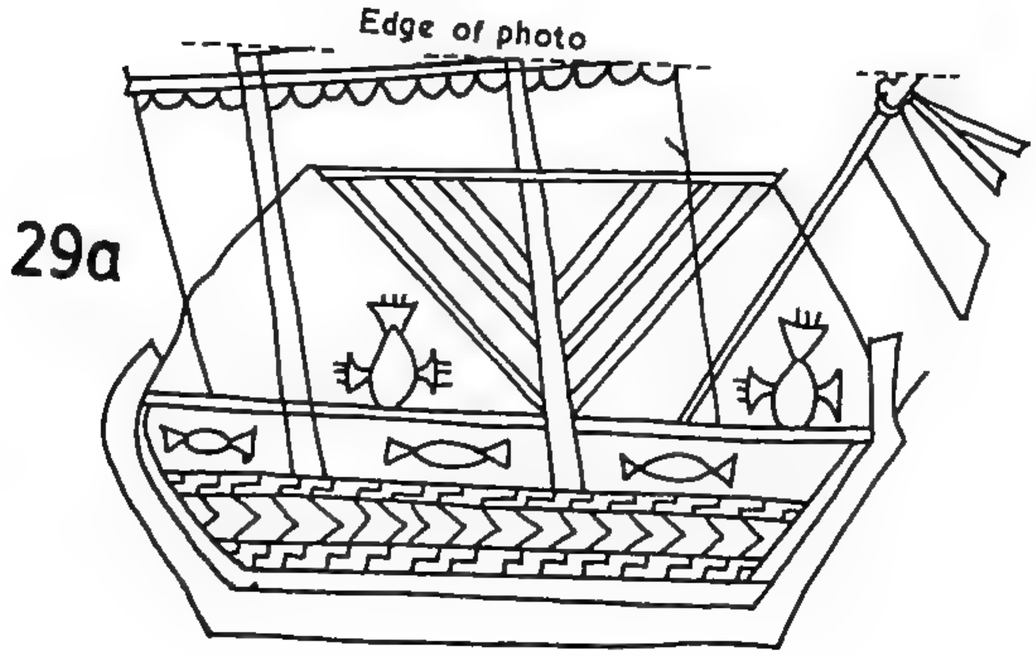

24c

25


26


27


28


Edge of photo
29a

widely discussed and analysed.[4] Other features worthy of note are the crow's nest, a deck-house situated ahead of the mast, straight stem and curved stern both of which are again decorated, and a detailed representation of an anchor hanging from a divided bowsprit. Slightly different but still dual bowsprits could be found on the *doni* of the Indian subcontinent until modern times and are still present in rudimentary form in some Omani *boums*. Also clearly shown is a method of controlling the rudder using ropes and two beams which reach beyond the rudder's trailing edge. This system could also be found in various traditional craft of the western Indian Ocean such as the *zaruk, badan, baggarah* and *zaruqah*. Note also that two members of the crew appear to be bailing out their ship with a *zir* amphora-like ceramic vessel.

24 (a) "Ship in a storm", (b) "river boat", (c) "Ship behind one of the Eastern Isles", from a *Maqramat of al Hariri*, Baghdad 1237 AD (Bib. Nat., Ms. Arabe 5847, Paris). This even better known *Maqamat* ship has two masts, what appear to be square sails and a rectangular rudder which, like that in the presumably Fatimid *Book of Stars* (figure 15), may be less realistic than the rudder on the Leningrad *Maqamat*. The oar-like object just ahead of the rudder has sometimes been interpreted as part of a tiller mechanism. But similarities with the Fatimid *Book of Stars* should again be noted. Perhaps the artist al Wasiti, who painted this particular *Maqamat*, was further removed from his original source than the illustrator of the Leningrad manuscript. He may even have been influenced by pictures in existing *Books of Stars*. Otherwise this ship, and the one partially hidden behind an island (c), differ only in detail from the Leningrad version. Meanwhile the river boat (b) is rowed by three men who stand in the stern, facing forward. Its hull is black with a tall decorated stern and probably prow and it has close parallels in presumed river or marsh craft from Egypt (figures 16 & 30). The construction might have consisted of bound reeds like some boats in the Tigris-Euphrates Delta or of bound date palm sticks like the shashah of Oman.

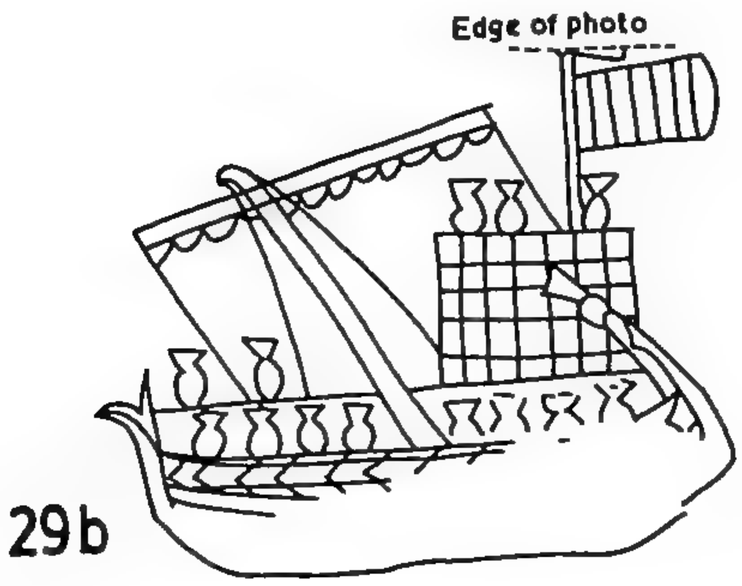
25 Detail from *Maqamat of al Hariri*, Egypt or Syria c. 1300 AD (British Lib,. Add. Ms. 22114, f. 132r, London). Manuscript illumination became increasingly stiff and stylized during the Mamluk period. This copy of the *Maqamat* is no exception, yet some features are still worth noting. The hull is essentially in the old Mediterranean tradition with tall, curved and flaring bow and stern. Steering is still by means of an oar, but a beak has been added, presumably under the inconographic influence of illustrations of galleys. The small projection behind the stern-post is, however, unexplained.

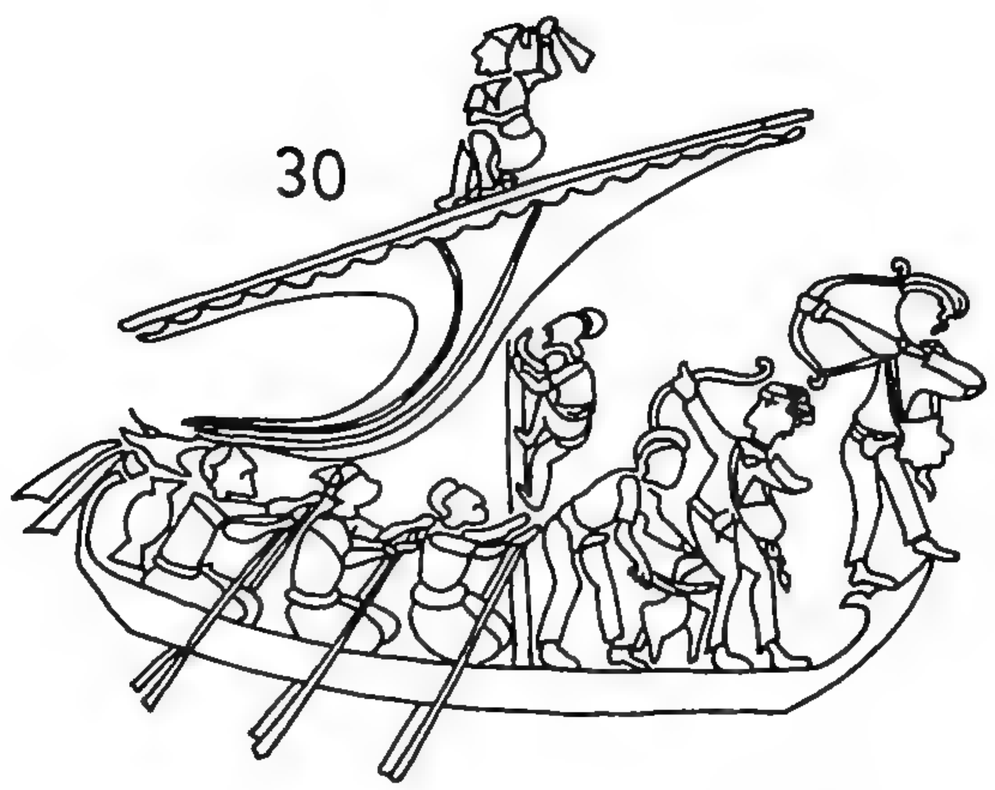
26 Fragment of paper with drawing of a ship, Egypt perhaps 13th century AD (Mus. of Islamic Art, Cairo). A number of very simple drawings of ships have been found in Egypt, almost all from Cairo. Most are as yet impossible to date with any accuracy as they fall into the rarely studied realm of Islamic folk art. Some scholars suggest that they served as lucky charms. This particular example is more detailed than most and its style recalls the simpler ceramics of North Africa (figure 13). Perhaps some such drawings served as potters's patterns. The ship illustrated here is clearly a war-galley carrying two marines and a helmsman who grasps a steering oar. A piece of rigging to support a mast may perhaps be seen on the right while the oars are arranged in a manner similar to, though far more crudely illustrated than, those in various 13th century Italian sources. The tall, curved and flared stern-posts is again present.

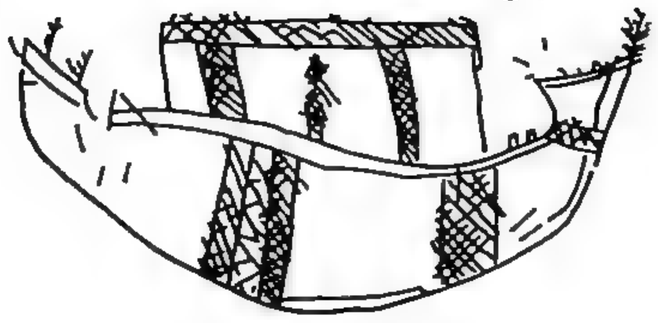
27 Fragment of paper with drawing of a ship, from Fustat, Egypt perhaps 13th-14th century (Keir Coll., inv. I.33, London). Though even cruder, this drawing probably shows another galley. Two men stand on the deck or central walkway while three oarsmen toil below. On the other hand such figures, with or without oars and seen through comparable arches, are also present in two *Maqamat* illustrations which are understood to show merchant vessels (figure 23 & 24a). This little drawing, however, also includes a steering oar, and extravagently curved stern and stem-posts, the latter being continued as rigging to support a single mast. An elaborate structure in the stern may represent a form of cabin although it has some similarities with the unexplained object in the stern of the earliest Syrian *Maqamat* ship (figure 22).

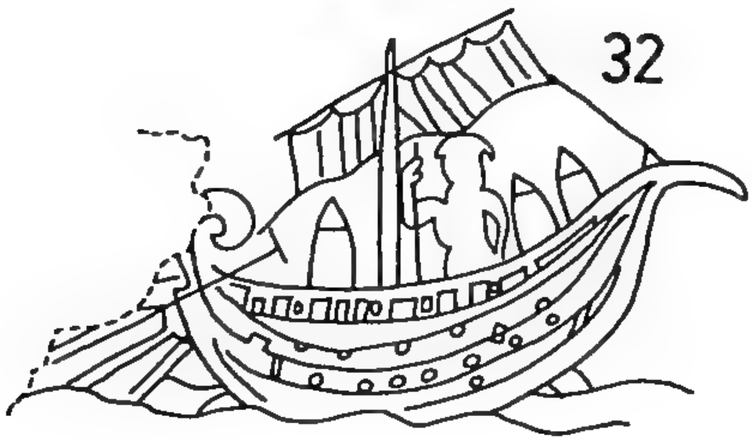
28 Fragment of paper with drawing of a ship, from Old Qusayr, Egypt 13th-14th century (Mus. of

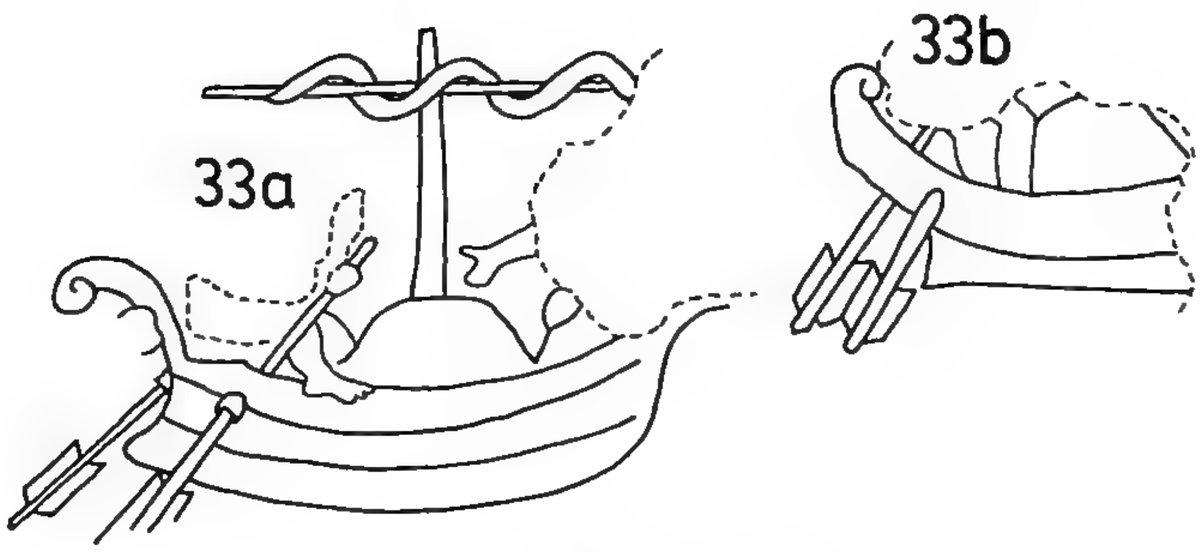
4. Many of the works listed in Footnote 1 dicuss the stitched hull, while Tim Severin's *The Sinbad Voyage* (London 1982) gives a graphic account of how such hulls are actually made.

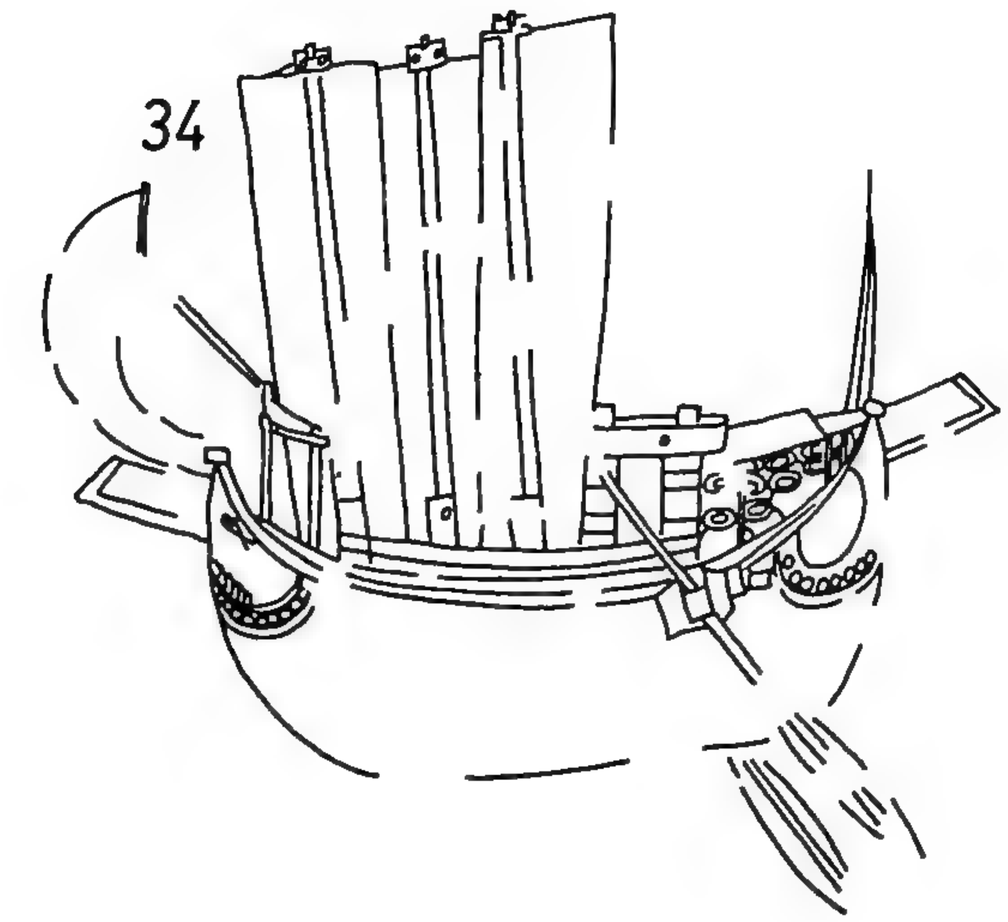

Edge of photo
29b

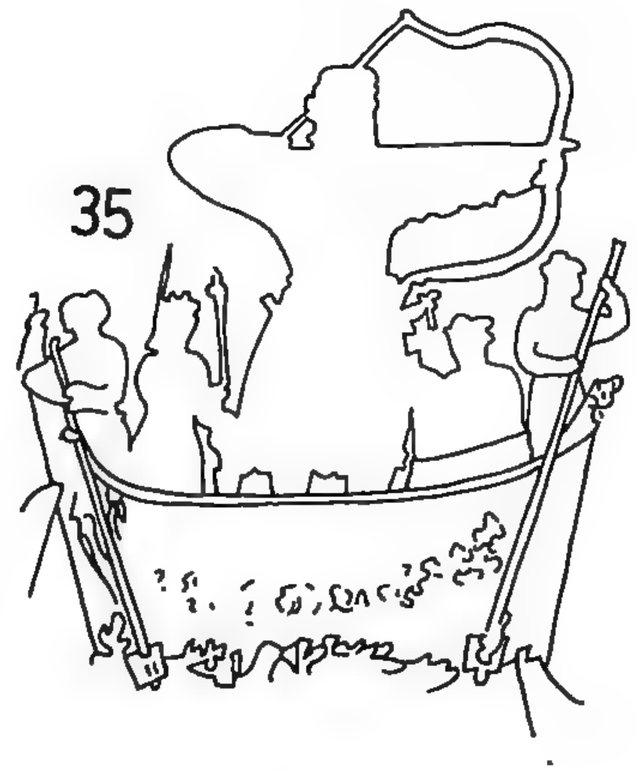

30

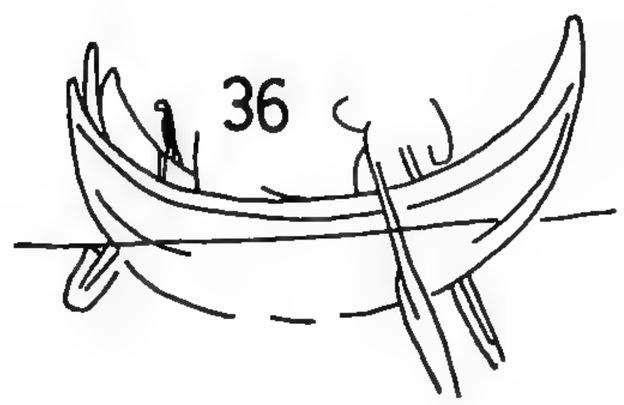

31


32


33a
33b


34


35


36

Islamic Art, inv. 1097, Cairo). This seems to be the only fragment of paper with a drawing of a ship yet found during the course of a controlled archaeological excavation. It was unearthed in the remains of an Egyptian Red Sea port and can be dated to the early Mamluk period. The vessel is probably single masted, perhaps with a yardarm to hold a lateen sail and seems to have a substantial deck-house amidships. The stem stern-post is essentially straight with a series of ropes hanging from it. The keel has a small projection, perhaps to protect the hull during beaching, like that in the Moroccan *Book of Stars* (figure 19). Yet it must be born in mind that this is an extremely small and crude drawing.

29 "Ship with fire-grenades on its deck and a smaller vessel" in *Kitab al furusiyya wa'l manasib al harbiyya (The Book of horsemanship and the engagements of war)* attributed to Hasan al Rammah, Egypt or Syria late 13th or 14th century (Bib. Nat., MS, Aabe 2825, f.100r, Paris). Although the main importance of this illustration lies in its portrayal of fire-weapons with which a sailing ship could defend itself, the ships themselves are also of interest in addition to which this is an unusual example of both the angled and more curved types of hull both appearing in one picture. The drawing is, of course, stylized but the proportions appear to be relatively realistic. The leading vessel has two masts, one clearly and the other probably carrying a lateen sail. It has a straight keel and essentially a straight stem and stern-posts although the former curves decoratively towards the top. There is no evidence of a deck-house nor of a rudder, though a steering oar is also absent. The hull of a Gulf, Omani or Indian Ocean *boum* is still essentially like this to the present day. The second and smaller ship has much more in common with the curved hulls associated with the medieval Mediterranean. It also has a distinctly forward-leaning mast with the curled summit seen in early Byzantine sources as well as an apparent deck-house at the stern. Does the fact that the sternpost overlaps this deck-house indicate a lack of knowledge on the part of the artist or could it indicate twin stern-posts, as seen in both Mediterranean war-galleys and some merchant ships? Interestingly enough this ship has not been provided with fire-weapons and a proper explanation should, perhaps, await a translation of the accompanying text.

30 "Duck hunting in a river or marsh boat", interior of inlaid bronze basin, Mamluk Egypt or Syria late 13th or early 14th century (Victory & Albert Museum, inv. no. 740-1898, London). Although all the silver inlay has been lost from this picture, enough detail remains to identify men using pellet-bows to hunt water-fowl. Three others row while kneeling on the boat and facing fowards. A fourth climbs directly up the mast while a fifth man at the mast-head appears to be frightening birds with a kerchief. The boat inself has a lateen sail and may consist of a solid bundle, or bundles, of reeds or palm branches. Its stem and stern, though beginning at an angle to the 'keel", curve up into flared decorative shapes, that at the stern forming a beasts head. In many ways the boat brings to mind not only primitive craft of the Nile valley, Delta and Lower Iraq but also the shallow draught, lateen sailed fishing craft which still survive on Egypt's Lake Manzalah.

Comparative Sources

31 Graffito, Palestine 4th-6th centuries AD (*in situ* Jewish burial chamber, Beth Shearim, Israel).

32 Mosaic from *House of Leontius,* Palestine 4th-6th centuries AD (Local Museum, Beth Shean, Israel).

33 "Boats in River Jordan" on *Map of the Holy Land* mosaic, mid-6th century AD (*in situ* Church of St. George, Madaba, Jordan).

34 "Ship attacked by sea monster(?)", wall painting in cave late 6th century AD (*in situ* Ajanta, India).

35 "Royal Hunt in marshlands", Sassanian relief carving on rock-face mid-7th century AD (*in situ* Taq-1-Bustan, Iran).

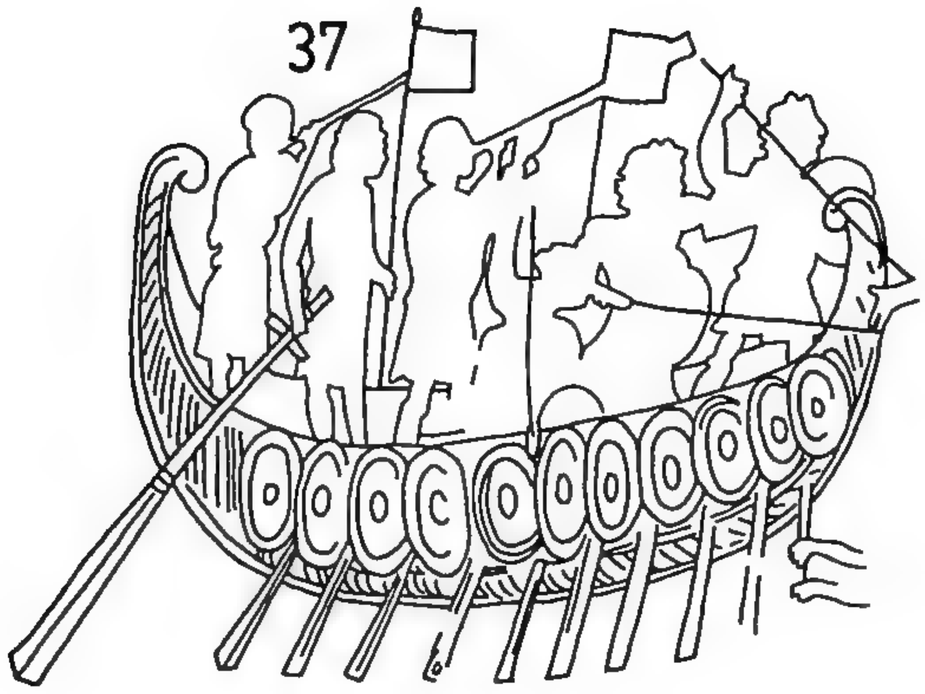
36 "Martyrs of Nicomedia," Byzantine manuscript mid-11th century AD (Lavra Monastery, Cod. Delta 51, f. 170r, Mount Athos, Greece).

37 "Sea Battle" in *Pseudo-Oppian Cynegetica,* Byzantine manuscript 11th-12th centuries AD (Bib. Marciana, Cod. Gr.497, Venice).

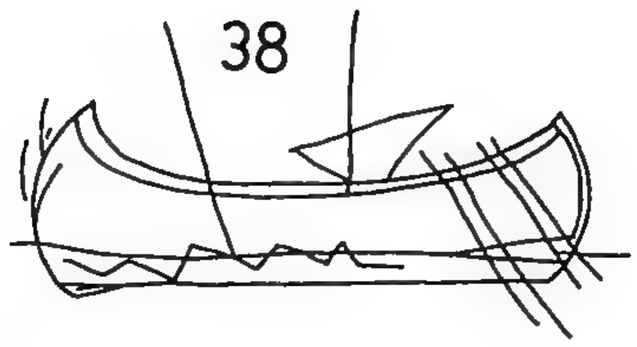
38 Graffito in "Pieve" (parish church) of Finale Ligure, 13th century AD (after M. Bonino "A medieval graffito at Finale Ligure," *Mariner's Mirror* 1975, pp. 291-2).

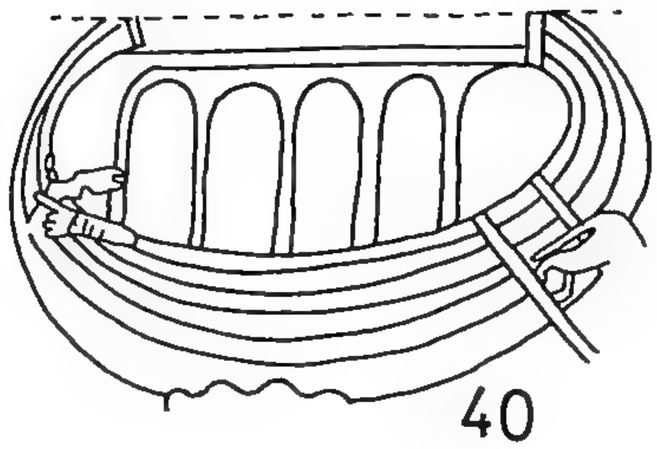
39 "Jonah thrown to the whale", carved relief late 11th-early 12th century AD (*in situ* church of Santa Maria in Valle Porclaneta, southern Italy).

37



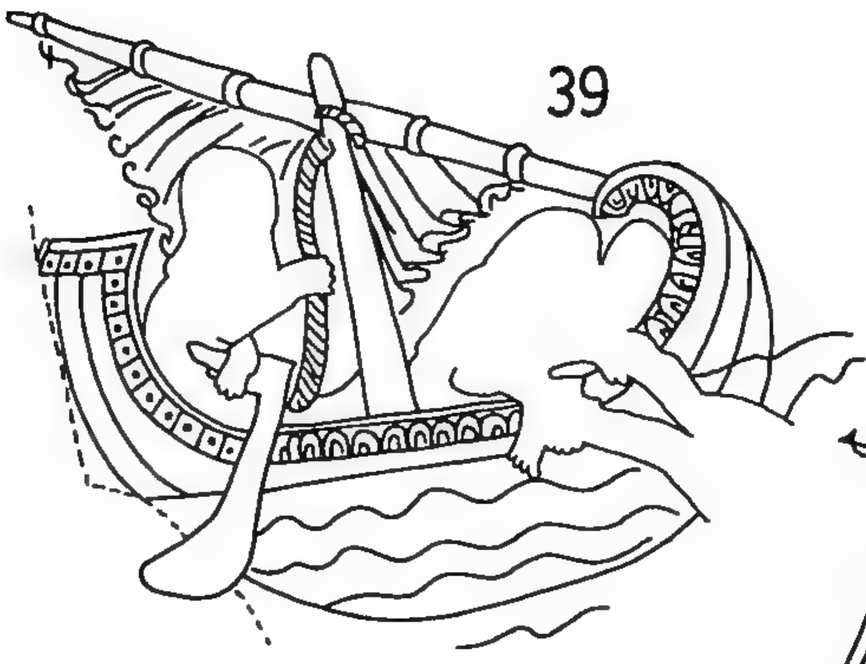
38



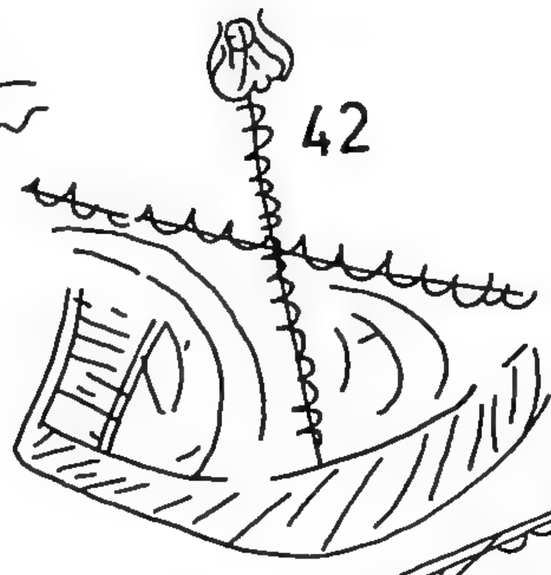


40

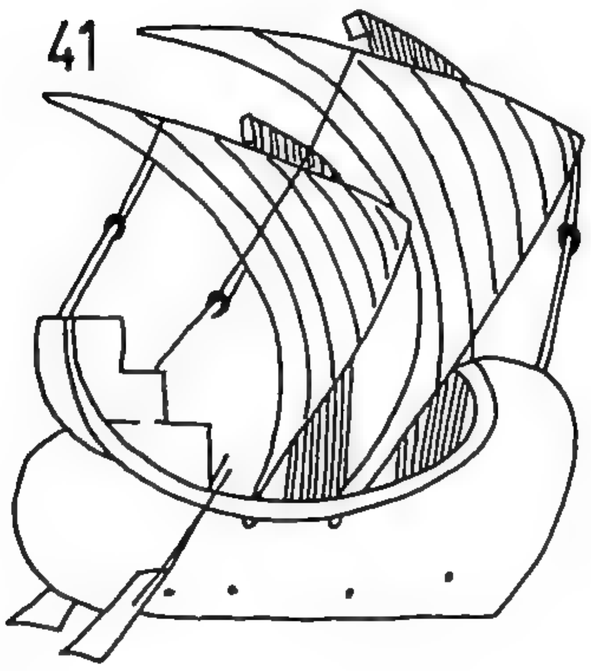
39



42



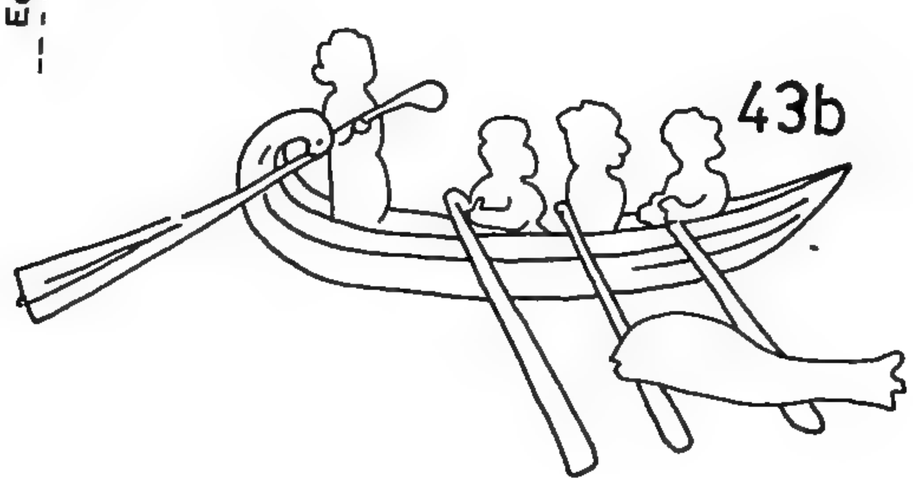
41



43a

Edge of photo

43b



40 "Noah's Ark", carved capital mid-12 century AD (*in situ* cloisters of Cefalu Cathedral, Sicily).

41 Ceramic plate from Corinth, Crusader Principality of Achaia 13th century (via American School of Classical Studies).

42 Sgraffito-ware ceramic bowl, Byzantine 12th-14th centuries AD (Byzantine Museum, no. 1823, Athens).

43 Byzantine manuscripts in Mount Athos, date unavailable but probably 11th to 13th centuries AD (from SM Pelekanides, edit., *Oi thedanroi pou agiou orous* Ser A, vol. V, Athens 1975).

44 Perhaps *paraskalmia* small craft, graffiti, Byzantine Trebizond 13th-15th centuries AD (*in situ* Museum Church of Santa Sofia, Trabzon, Turkey, after A. Bryor "Shipping in the Empire of Trebizonds", *Mariner's Mirror* 1966, pp. 3-12).

14th-16th centuries and later on

Later Islamic representations of ships can to some extent be divided between those in Ottoman art and "the rest." Ottoman art was characterized by a realism seldom seen in other Muslim cultures. This seems to have been particularly true where eveyday artifacts were concerned. No other Islamic culture of the later period, except perhaps that of the Indian Moghuls, had the same interest in everyday life, ordinary people and the accurate recording of events. Some art historians have even compared the Ottomans' concern with the mundane details of their great Empire with the similarly introverted and imperial interests of ancient Rome. The Ottoman Empire was perhaps also the most marine orientated of great Islamic empires and as a result Ottoman illustrations of shipping are remarkably accurate, even to details of rigging and deck gear. Meanwhile the other major Islamic art of these later centuries, that of Iran, seems to have portrayed ships in a correpsondingly idealized or unrealistic manner. The Moghul art of Islamic India has not been included in this survey but interesting illustrations of Indian Ocean ships may be found in graffiti from various Islamic coastal sites. The Muslim west, Spain and North Africa, are poorly served for this period although a few pictures so survive.

ILLUSTRATIONS

45 "Euphrates boat" in *Maqamat*, Egypt 1334 AD (Nat. Lib., Ms. A.F.9,f.47r, Vienna). Mamluk art became increasingly stylized during the 14th and 15th centuries. Nevertheless some illustrations still portrayed boats with recognizable features. This vessel has characteristics seen in earlier Syrian or Egyptian manuscripts such as a lateen sail, a mast with a curled summit, a steering oar and a curved sternpost. Even its straight stem has something in common with previous illustrations (figs. 8, 23 & 24) and in fact this ship probably reflects sea-going ships rather than the river-craft of Iraq or Egypt itself.

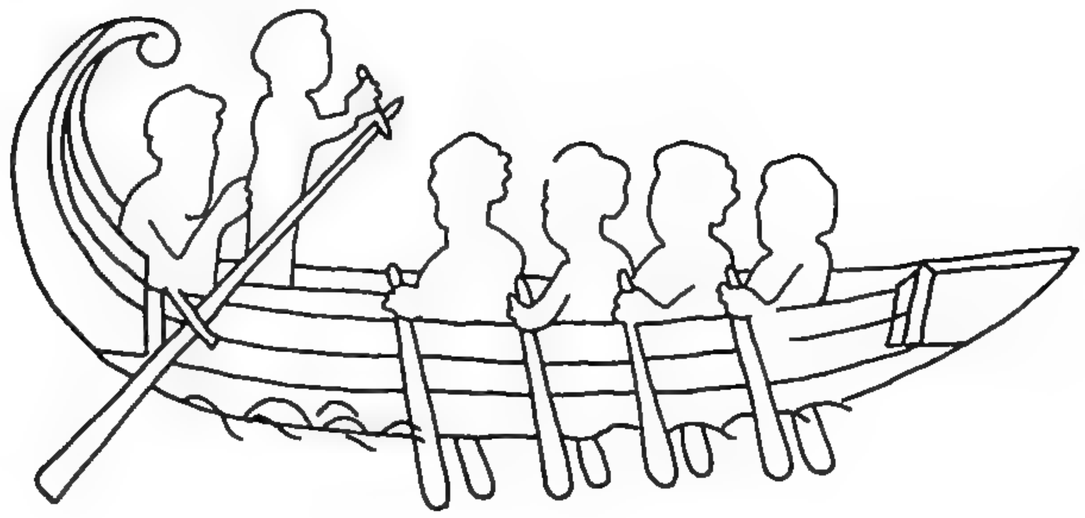
46 *Al jami' bayn al 'ilm wa'l 'amal al nafi' fi sina'at al hiyal* of al Jazari, Egypt 1354 AD (Hans P. Kraus Coll., New York). This page is from a mid-14th century copy of a 1206 AD original of al Jazari's book of mechanical devices, normally known as the *Automata*. Once again it shows a hull with a straight stem and a curved stern. Extremely stylized as the drawing might be, it remains rooted in a long-established traditional hull form.

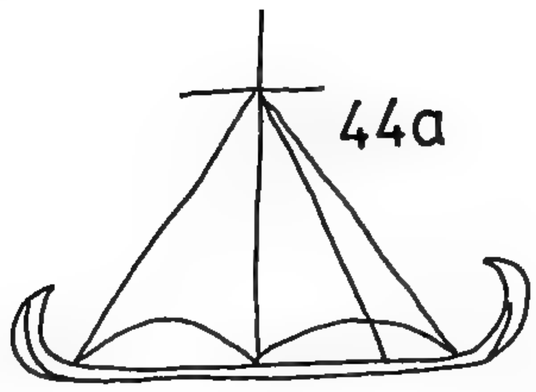
47 Painted leather shadow puppet, Egypt 15th century (Staatliche Museen, West Berlin). This elaborately cut shaddow puppet it here shown considerably simplified. The figures have been reduced to their outlines so that the ship can be seen more clearly. It is unlikely to illustrate a Nile vessel, as sometimes thought, for the occupants are warriors with miniaturized shields beneath their bows. The vessel is more likely to be a stylized war-galley with a clearly illustraed stern rudder. The steersman, who in the original shadow puppet appears to wear a lamellar jawshan or cuirass, is on a small raised afterdeck and is shielded by the kind of stern cabin which has been seen before (figs. 27 & 42)

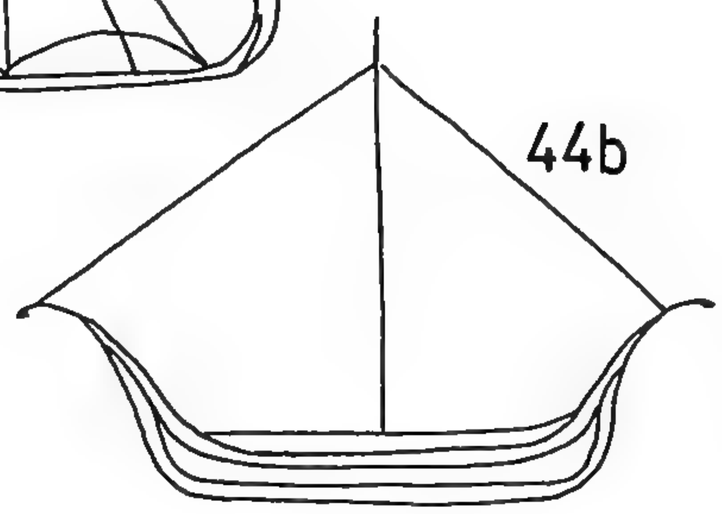
48 Graffito in house at Husuni Kubwa, 15th-16th centuries East Africa (*in situ* Kilwa, Tanzania. After N. Chittick *Kilwa: an Islamic City on the East African Coast*, Nairobi 1974). This particular graffito differs from those found in the Great Mosque at Kilwa (figs. 49 & 50) in both its style and in the ship it portrays. All one can say is that the vessel has a single mast and an almost symetrical hull. Efforts to read anything into the patterning on its hull are probably misleading, though parallels with earlier Egyptian sources may be noted (figs. 6, 28 & 29) as well as with later wall paintings from Jordan (fig. 67).

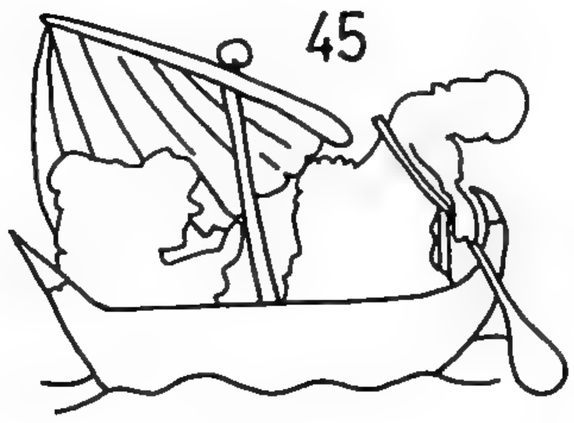
49 Graffiti from northern end of Great Mosque, 15th-16th centuries East Africa (A - now in Na-

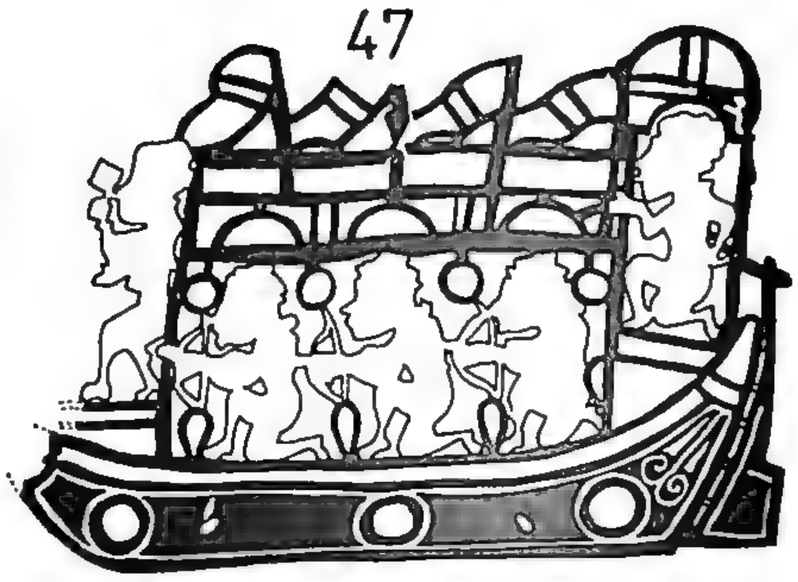
43c

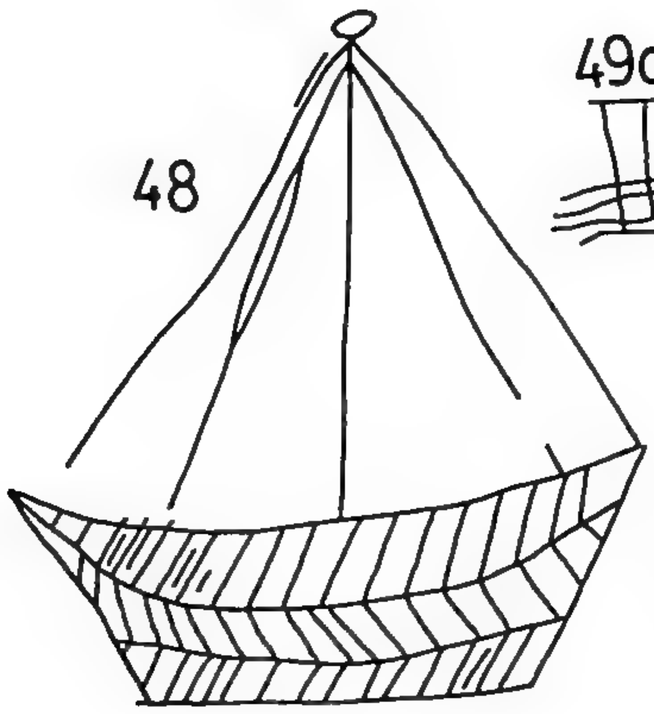


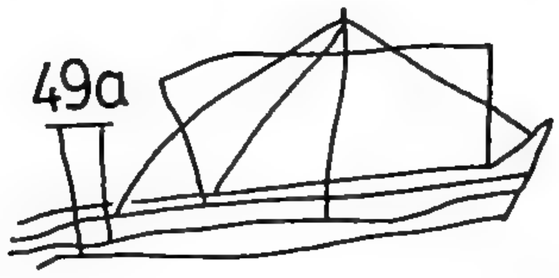


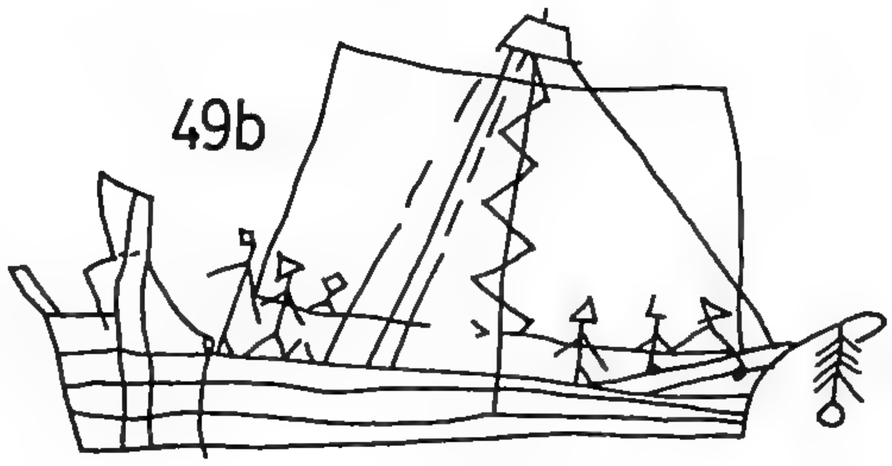


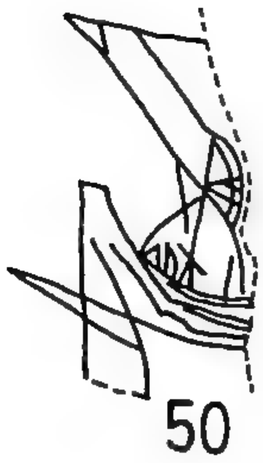


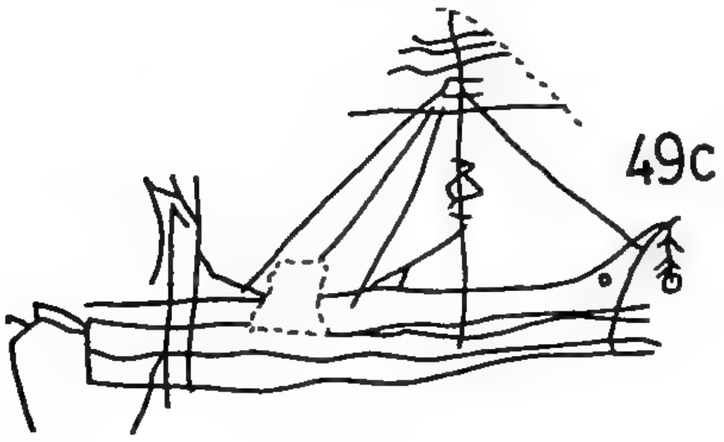


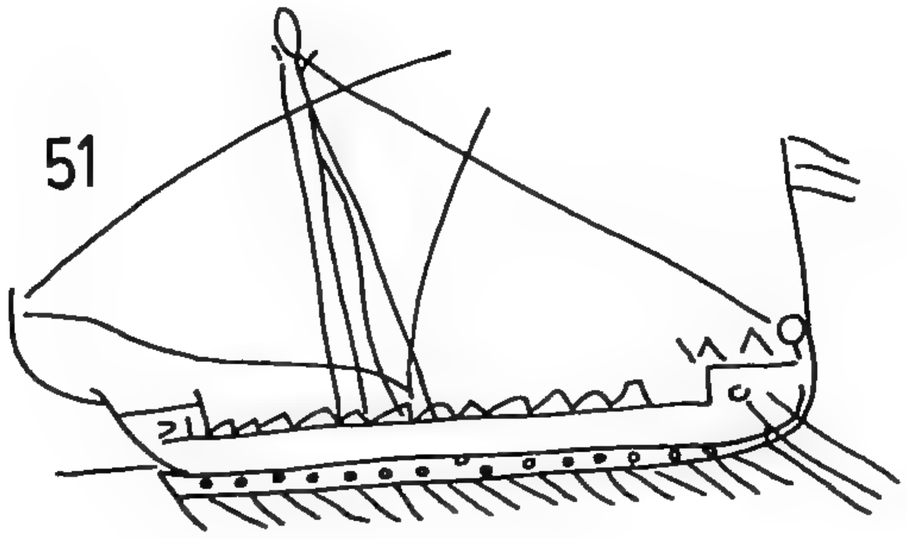












tional Museum, Dar es Salaam; B & C - *in situ* Kilwa, Tanzania. After Chittick). These more clearly drawn craft are obviously related to surviving east African and Omani coastal vessels. The graffiti themselves invite comparison with others from Oman (fig. 63). Perhaps the most striking features are, however, the rectangular sails, sweeping and raked stems and vertical projections at the stern. These bring to mind traditional Omani vessels which are considered to predate European influence such as the *badan baggarah* and *zaruqah*. *Badans* were also known to use lug sails rather than the lateen popularly associated with Arabian craft. Some of their sails were, in fact, almost rectangular rather than being true lug sails.

50 Graffito from southern end of Great Mosque, 15th-16th centuries East Africa (*in situ* Kilwa, Tanzania. After Chittick). It is a shame that so little of this drawing remains for it seems to have been remarkably accurate judging by what remains. This is a detailed representation of the characteristic stern of a *badan, battil, baggarah* or *zaruqah,* including the horn to which steering ropes were attached, a deep rudder which protrudes well below the keel and a tall sternpost to which the rudder is attached.

51 Graffito from Malaga, late 14th(?) century (Museo Naval, Madrid). This better known graffito is doubtfully dated and could be either earlier or later. It shows a typical single-masted Mediterranean war-galley with a lateen sail, raised boarding beak, probably a single bank of oars, slightly raised fore and aft castles and steering oars rather than a rudder. One may assume that such vessels were responsible for maintaining Muslim communications between the Kingdom of Granada and Morocco (see notes to figure 19).

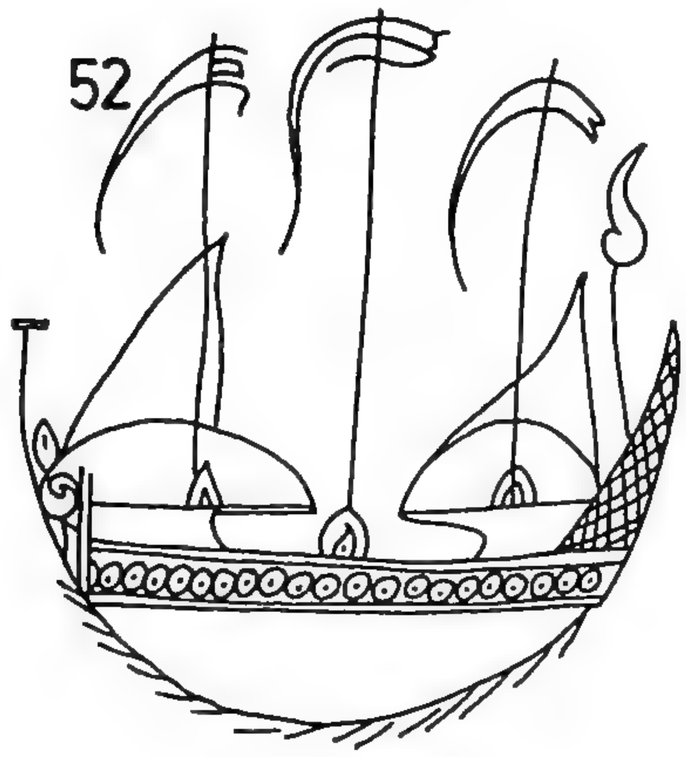
52 Polychrome ceramic bowl from Rabat, 15th century (Archaeological Museum, Rabat). The ceramics of later medieval North Africa are crude in comparison to those of Muslim Andalusia. The ship on this piece is highly stylized yet certain features can again be identified. It has three masts, two of which carry lateen sails, plus what appears to be a bank of oars though these are not connected to a possible row of oar-ports. Even the cross-hatched triangular projection on the right side recalls features in earlier Islamic representations (figs. 6, 11, 23, 24a & c). Such ceramic decorations could be traditional and have no connection with contemporary shipping. On the other hand Rabat is very close to Sale, home port of the famous 16th and 17th century "Sallee Rovers". These corsairs used three-masted *xebeca* and ranged across much of the north Atlantic.

53 Silver top of sabre hilt, Ottoman mid-late 15th century (Topkapi Armoury, Istanbul). Dr. D. Alexander of the Metropolitan Museum of Art, New York, has suggested that this sabre was decorated for Sultan Mehmet II (1451-1481AD) by Italian craftsmen.[5] Many such men worked for the Ottoman Court and the style is in a Western rather than Islamic artistic tradition. Yet there are plenty of equally realistic ship illustrations in slightly later Ottoman art (figs. 54 to 61) and in the art of neighbouring balkan regions (figs. 69, 75 & 78). Even if the craftsman was an Italian there no reason why this ship should not reflect a Turkish vessel of the period although western documentary sources suggest that the Ottomans used few *carracks*. Such vessels were probably almost identical to those of other Mediterranean lands and it is worth noting that the term *qarqur* (pl. *qaraqir*) meant a large long ship in Classical Arabic. The first usage of the term is unclear but it is also worth pointing out that the plural of the Arabic term is closest to the European word, perhaps suggesting that it was the westerners who adopted the eastern word rather than the other way around. This illustration is by no means the first specifically Mediterranean representation of a rudder, but the illustration shows it very clearly and in most respects the ship itself is a typical *carrack,* though lacking a mizzen mast. Could the gigantic figure in the stern, however, be using a *kamal*, a typical early Islamic device to measure the altitude of stars and thus calculate latitude? The dotted circle in the middle of the hull represents a rivet which holds this decorative plate to the sabre-hilt.

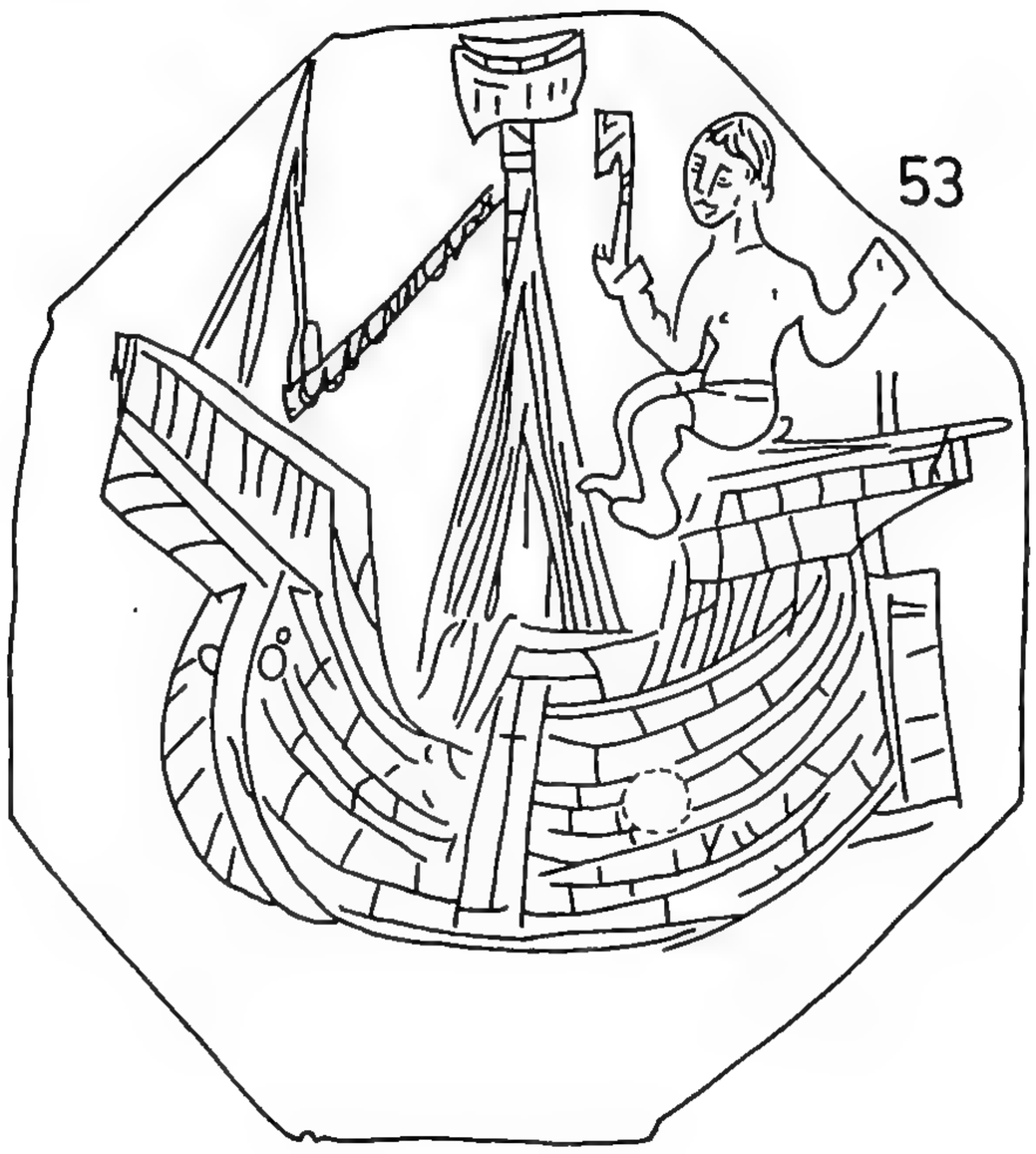
54 & 55 Iznik-ware ceramic bowl, Ottoman 16th-17th centuries (Museum of Islamic Art, Cairo). Ships both large and small are among the most popular motifs in the beautiful ceramics known as Iznik-ware. This is hardly surprising given the Ottoman Empire's strong maritime orientation, its great

5. Dr. Alexander put forward this idea during correspondence in 1987.

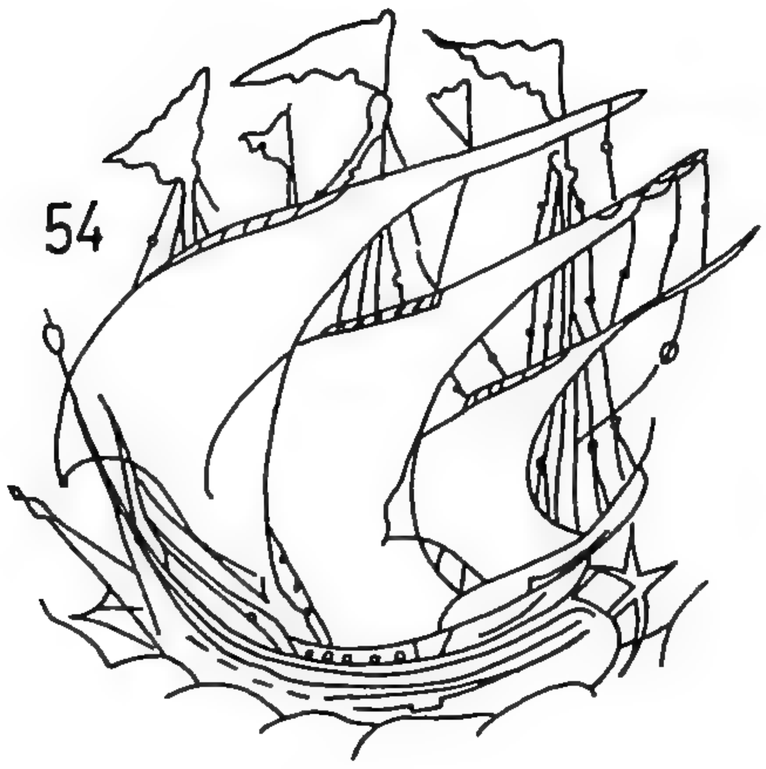
52



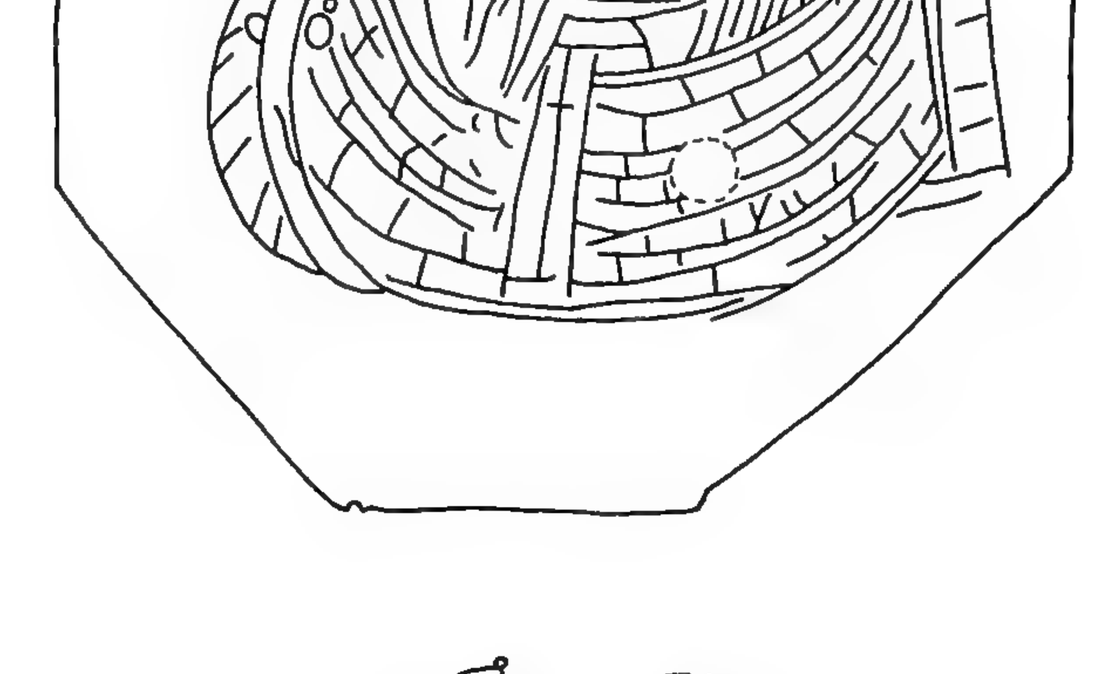
53

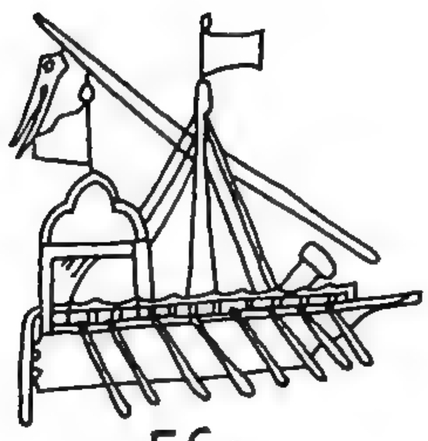


54



55





56a

56b

fleets and the fact that Iznik (ancient Nicea lies close to the Sea of Marmora. Little scholarly attention has apparently been given to these ship pictures, two of which are presented here to indicate the degree of vigerous realism and varied vessels that may be found in Iznik-ware.

56 *Diwan Najati,* Ottoman 1518/9 AD (Nat. Lib., Ms. Turk. 18, Cairo). This manuscript may be taken to representing an older, more stylized and perhaps more traditionally Islamic aspect of Ottoman miniature painting. Nevertheless the crudely drawn little war-galleys include readily identifiable features consistent with early 16th century ship design. This even extends to their having a reduced number of oars, each presumably rowed by a team of men, instead of the earlier system of grouped smaller oars. Whether the continued portrayal of dome-like structures over the stern-castles (a & c) reflected an actual tradition in Islamic shipping or was simply an artistic convention is unknown.

57 "Views of harbours," Ottoman manuscript 1545 AD (Topkapi Lib., Ms. Hazine 1608, Istanbul). In contrast to the preceding figure this manuscript demonstrates a newer, to some extent Western influenced and certainly more realistic trend in Ottoman painting. As far as ship illustration is concerned the miniaturists of 16th century Turkey conceded nothing to their Western competitors. Here are tall ships, galleys and small craft in all attitudes and all weathers, shown with a vigour and charm that makes them an important but as yet strangely neglected source of information in maritime history.

58 "Ships in a storm," *Tarikh Sultan Bayazit* Ottoman c.1540 AD (Topkapi Lib., Ms. Revan 1272, f.24r, Istanbul). This similarly dated manuscript shows an even greater variety of Turkish ships from various angles and in one case actually sinking (h). The rigging and sails are particularly interesting.

59 "View of a harbour," *Tarikh Sultan Bayazit* Ottoman c.1540 AD (Topkapi Lib., Ms. Revan 1272, Istanbul). Another page from the same manuscript illustrates galleys with oars raised and awnings over their rowing benches. Two smaller craft include what looks remarkably like a Venetian gondola.

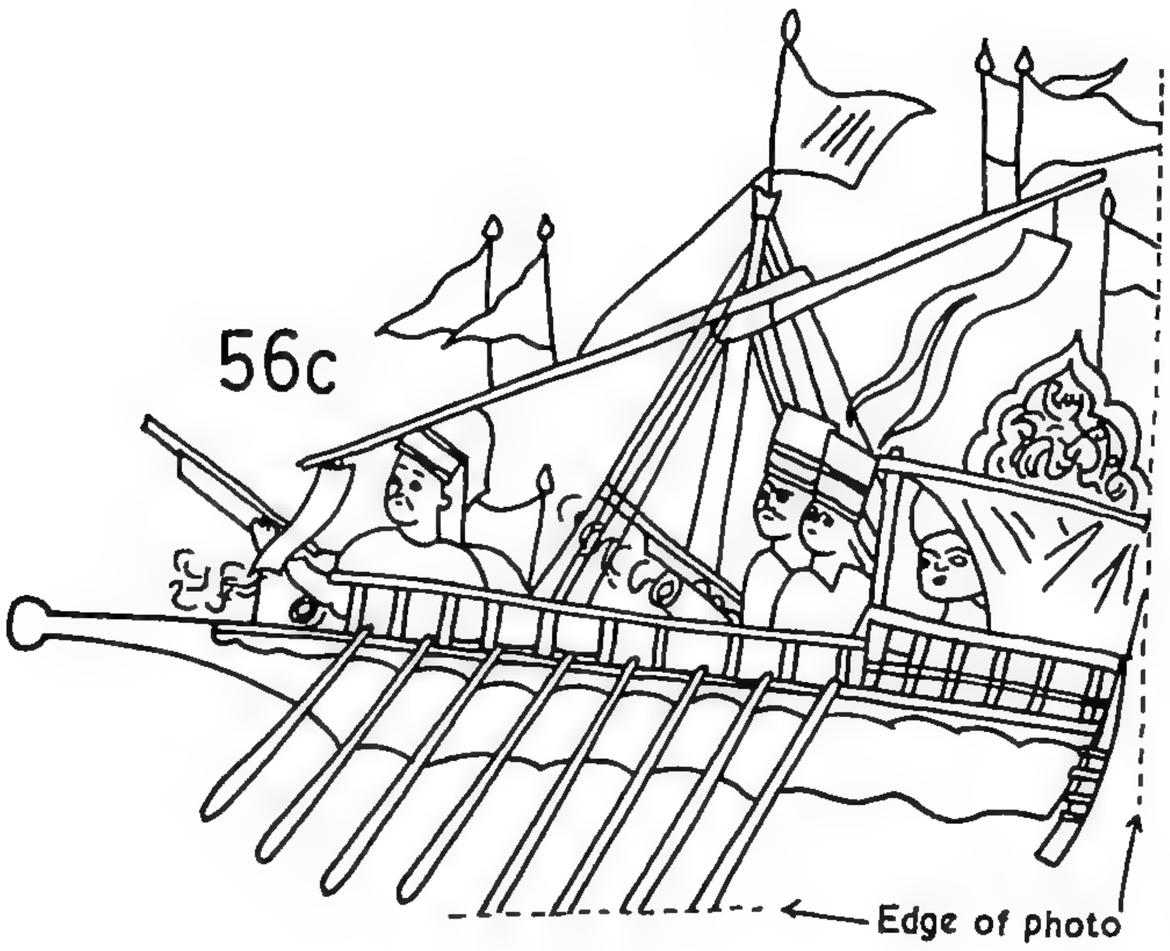
60 "Conquest of Cyprus by Turks," *Shahinshahnamah* Ottoman 1592-97 AD (Topkapi Lib., Ms. Bagh. 200, Istanbul). The identification of this manuscript is not entirely certain. It does, however, provide some of the clearest and certainly among the most colourful illustrations of 16th century Mediterranean war-galleys at anchor, plus a small coastal craft which looks much like a modern Aegean *kayik* (a).

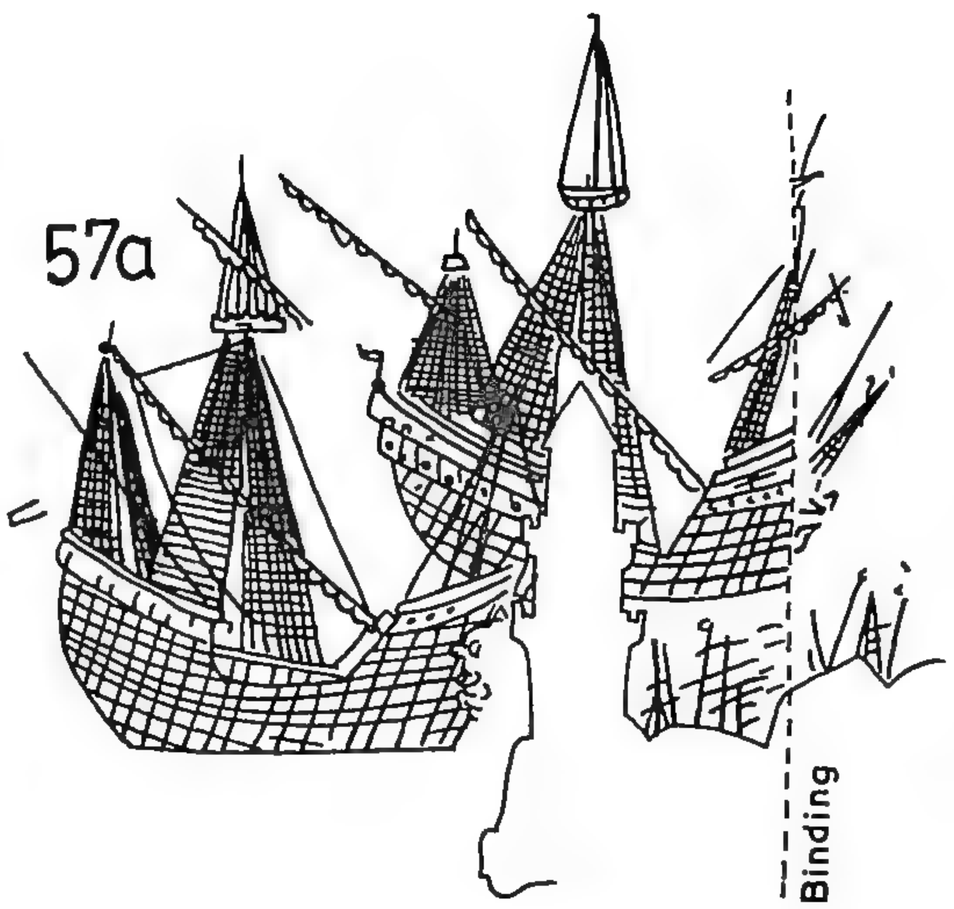
61 "Capture by Fasha fortress", *Shahinshahnamah* Ottoman 1592-97 AD (Topkapi Lib., Ms Bagh. 200 f.67v, Istanbul). This clearly identified illustration contains one of the finest available pictures of a 16th century war-galley and its rigging (b).

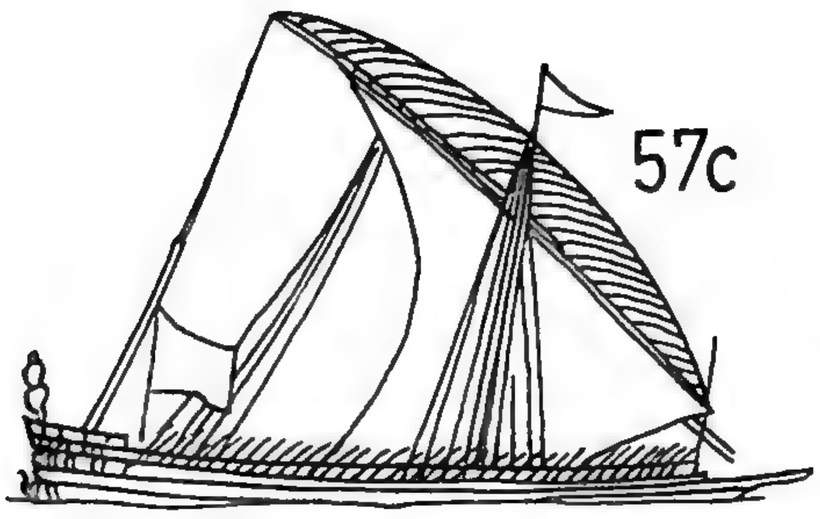
62 Drawing on fragment of paper from Egypt, possibly 16th-17th century (Museum of Islamic Art, Cairo). A word beneath this simple drawing might read *ghalyun* (galleon) but is, unfortunately, badly written. The ship itself is a three-masted square-rigged vessel of a type which became increasingly common on both sides of the Mediterrean and in the Indian Ocean from the 16th century onwards (fig. 66).

63 Graffiti, Oman late 17th to early 20th centuries (a-b *in situ* gateway of castle, Nizwa; c-d *in situ* gateway of castle, Hazm). As far as is known the abundant graffiti in the many castles of Oman have yet to be studied. Some of these 17th century buildings are currently being restored and many of the graffiti may already have been lost. They portray a variety of traditional craft, such as the two-masted *baghlah* or *ghanjah* (c & d), though others (a & b) are much more difficult to identify.

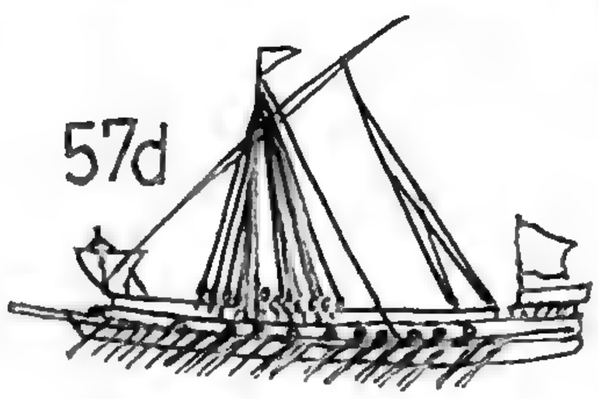
64 "Iskandar shooting ducks," *Diwan-i-Mir 'Ali Shir Nawa'i,* Tabriz 1526 AD (Bib. Nat., Ms. Suppl. Turc., 316, f.447v, Paris). In stark contrast to ship illustration from the Ottoman Empire and even from the Arabian Peninsular, that of Iran is remarkably unrealistic. But this is hardly surprising given the fact that most later centres of so-called Persian art were far from the sea. Nor did later Iranian dynasties have much interest in the sea. One of the ships shown here appears to have a single square sail but is unlikely to reflect current reality. More striking, in fact, is the similarity between this duck hunting trip and that illustrated over a thousand years earlier at Taq-i-Bustan (fig. 35). The similarity is so striking that one is bound to wonder if this artist had not consciously based his work on the earlier portrayal of a semi-divine ruler. On the other hand might not the marsh craft of south-western Iran and southern Iraq have re-

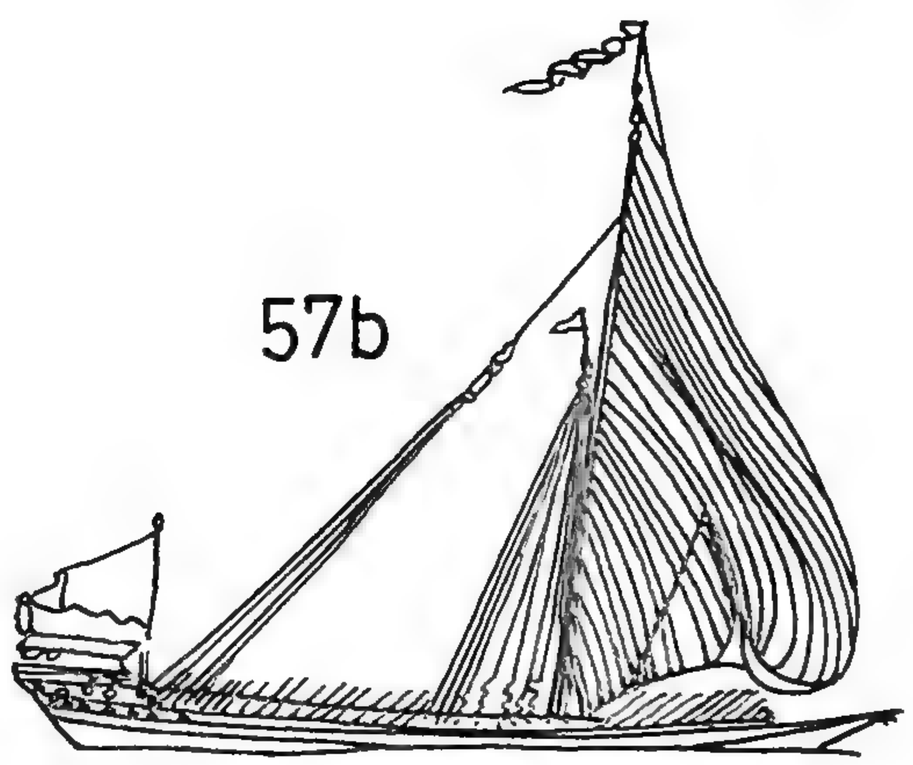

56c
Edge of photo


57a
Binding


57c

57e


57d


57b

mained essentially unchanged for a thousand years?

65 *Haft Awrang*, Mashad 1556-65 AD (Freer Gallery of Art, no. 46.12, f.147, Washington). The same form of boat appears in this manuscript which was again made far from the sea. It appears to show, albeit unrealistically, a hull of stitched construction (see figs. 23, 24a & c).

66 Wall paintings, Oman late 17th-18th centuries (*in situ* castle, Jabrin). Much more realistic, though artistically inferior, are these silhouette-like paintings in the Ya'rubid period palace-fortress of Jabrin. They almost certainly illustrate the essentially western square-rigged ships used by the Omanis during the period in which they competed with Portugal and other European powers on the Indian Ocean.

67 Wall paintings, Jordan late 18th-early 19th centuries (*in situ* gateway of Qala'at al Hassa, Al Hassa). The ruined fort of Al Hassa was built during the reign of the Ottoman Sultan Mustafa III (1757-74 AD) but it is by no means certain that these crudely drawn ships were made at the same time. The similarity in their style, not only with the pictures in Oman (fig. 66) but with surviving fragments of Egyptian painted paper (figs. 26, 27, 28 & 62) almost suggest the existance of a previously unrecognized maritime folk art in areas linked by the Indian Ocean. The ships shown at Qala'at al Hassa are varied but difficult to interpret. Multiple masts and lateen sails are clearly present. One or two vessels (d & e) appear to be of very shallow draught and have much in common with boats of the Nile and lake Manzalah in Egypt. Perhaps these pictures were made by Egyptian soldiers during Mehemet Ali's short occupation of the area in 1831-40 AD.

68 Embroidered *peskir* napkin from the Black Sea coast, Turkey 19th century (Mus. of Anatolian Civilizations, Ankara). Highly stylized as this embroidery is, it still clearly illustrates a vessel with a deck-house at the stern and what appear to be three masts.

Comparative Sources

69 "St. Dimiter of Salonika stilling the waves" wall painting, Bulgaria 1259 AD (*in situ* Boyana Church, Sofia).

70 From "Baptism of Jesus" wall painting, Cyprus c.1280 AD (*in situ* church, Panagia tou Moutoulla).

71 *History of Outremer*, manuscript from Acre 1286-7 AD (a - Bib. Munic., Ms. 142, f337v, Boulogne; b - Bib. Nat., Ms. Fr. 9084, f.125v, Paris).

72 Graffiti, Byzantine: A - post 12 cent. (*in situ* Church of St. Luke of Stiris, after O.F.A. Meinardus, "Medieval Navigation according to Akidographemata in Byzantine churches and monasteries," in *Deltion tes Christianikes Archaiologikes Etaireias, per D*, VI 1972, p.44, fig.VI/4); B - 15(?) cent., C - 16(?) cent., (both after M. Goudas, "Meslionika charagmata ploion epi tou theseiou" *Byzantinis* II, 1910 pp. 319-57).

73 Graffiti, Byzantine 13th-15th centuries (*in situ* Museum church of Aya Sofia, Trabzon. After A. Bryer "Shipping in the Empire of Trebizond," *Mariners' Mirror* LII, 1966, pp.3-12).

74 "Genoese(?) ship," graffito, Byzantine 14th-15th century (*in situ* Museum church of Aya Sofia, Trabzon. After Bryer).

75 "St. Dimiter of Salonika stilling the waves" wall painting, Moldavia 1487-97 AD (*in situ* monastery church, Balinesti).

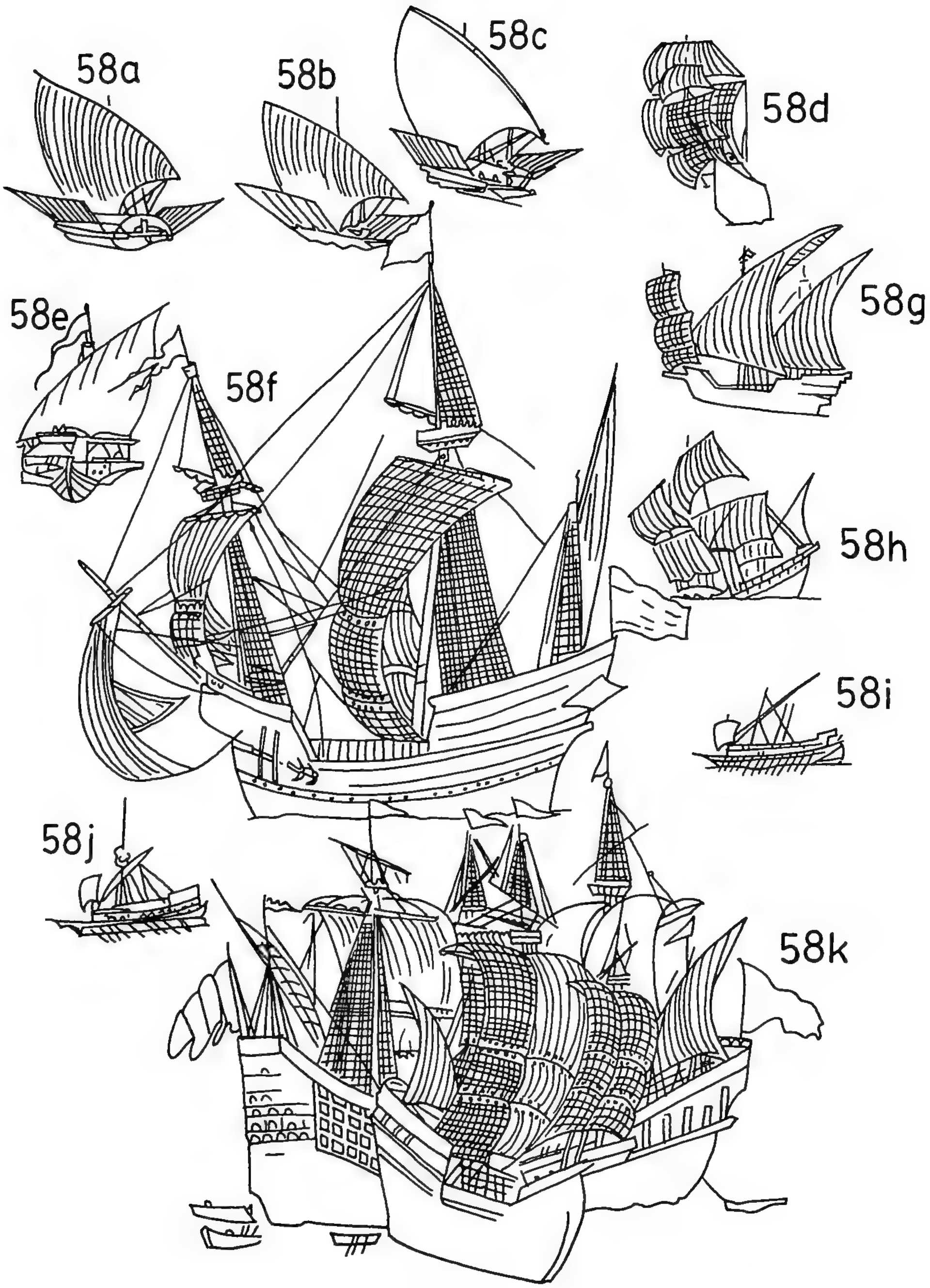
76 "Turkish ship at Ottoman conquest of Constantinople" wall painting, Moldavia 1532-37 AD (*in situ* Monastery church, Moldovita).

77 "Ship held by angel" wall painting, Moldavia 16th century (*in situ* monastery church, Voronets).

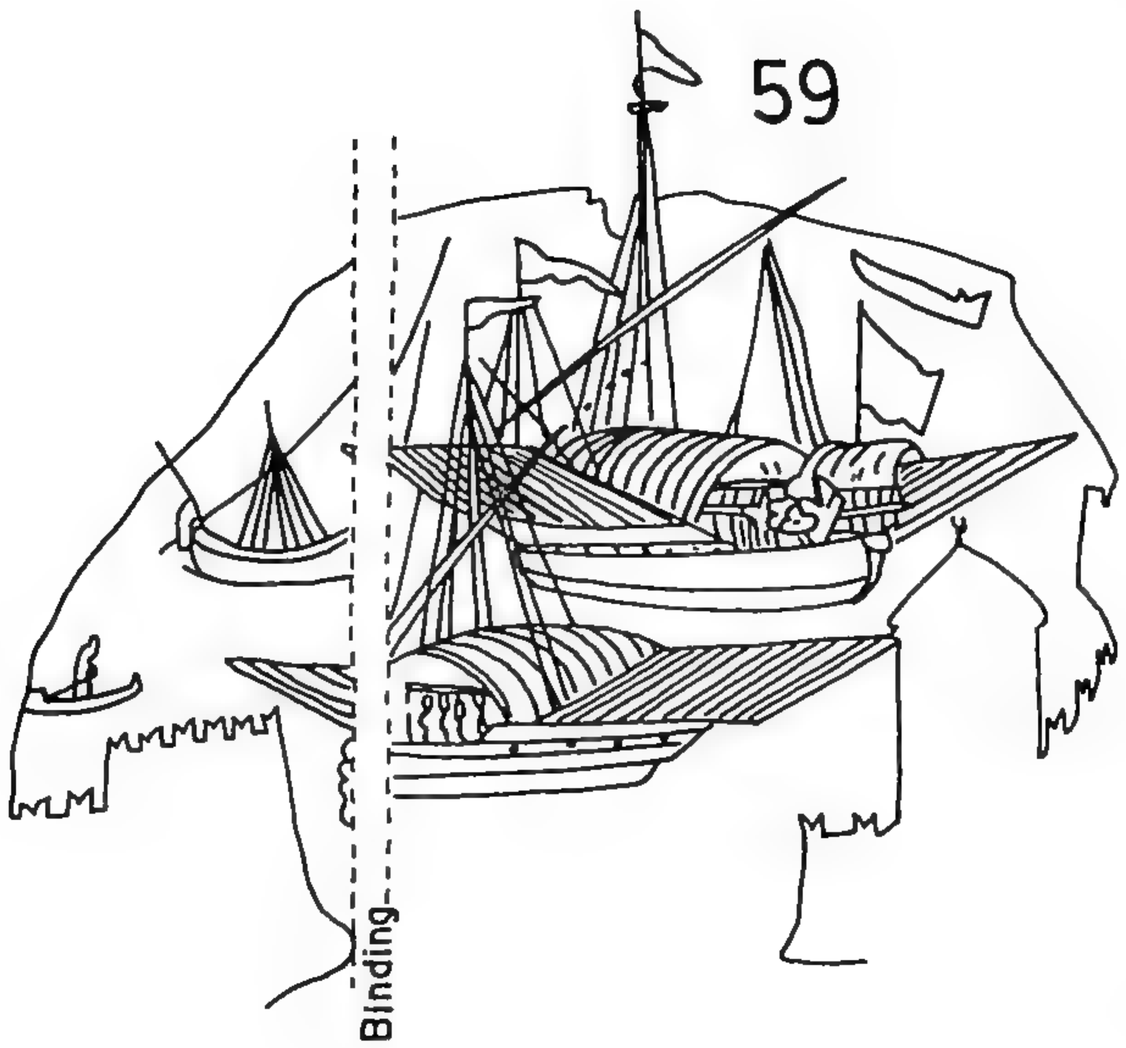
78 "St. Dimiter of Salonika stilling the waves" wall painting, Moldavia 16th century (*in situ* monastery church, Sucevita).

79 "Ottoman galleys at battle of Cape Musandam 1544 AD," *Livro de Lizuarte de Abreu*, Portugese manuscript c.1564 AD (Pierpont Morgan Lib., New York).

80 "Arab ships" in map of Indian Ocean, *Lopo Homen-Reinels Atlas*, Portugese 1519 AD (Bib. Nat., Paris).

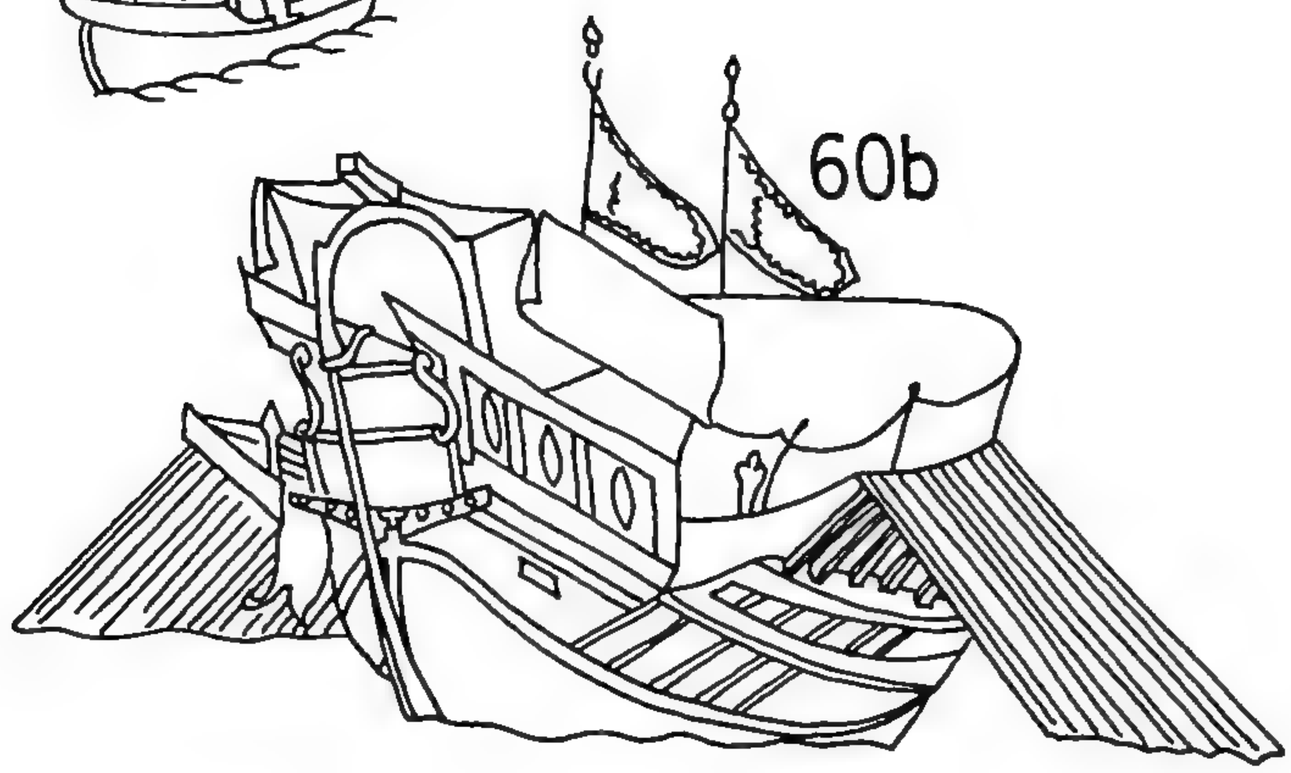

58a
58b
58c
58d
58e
58f
58g
58h
58i
58j
58k

59

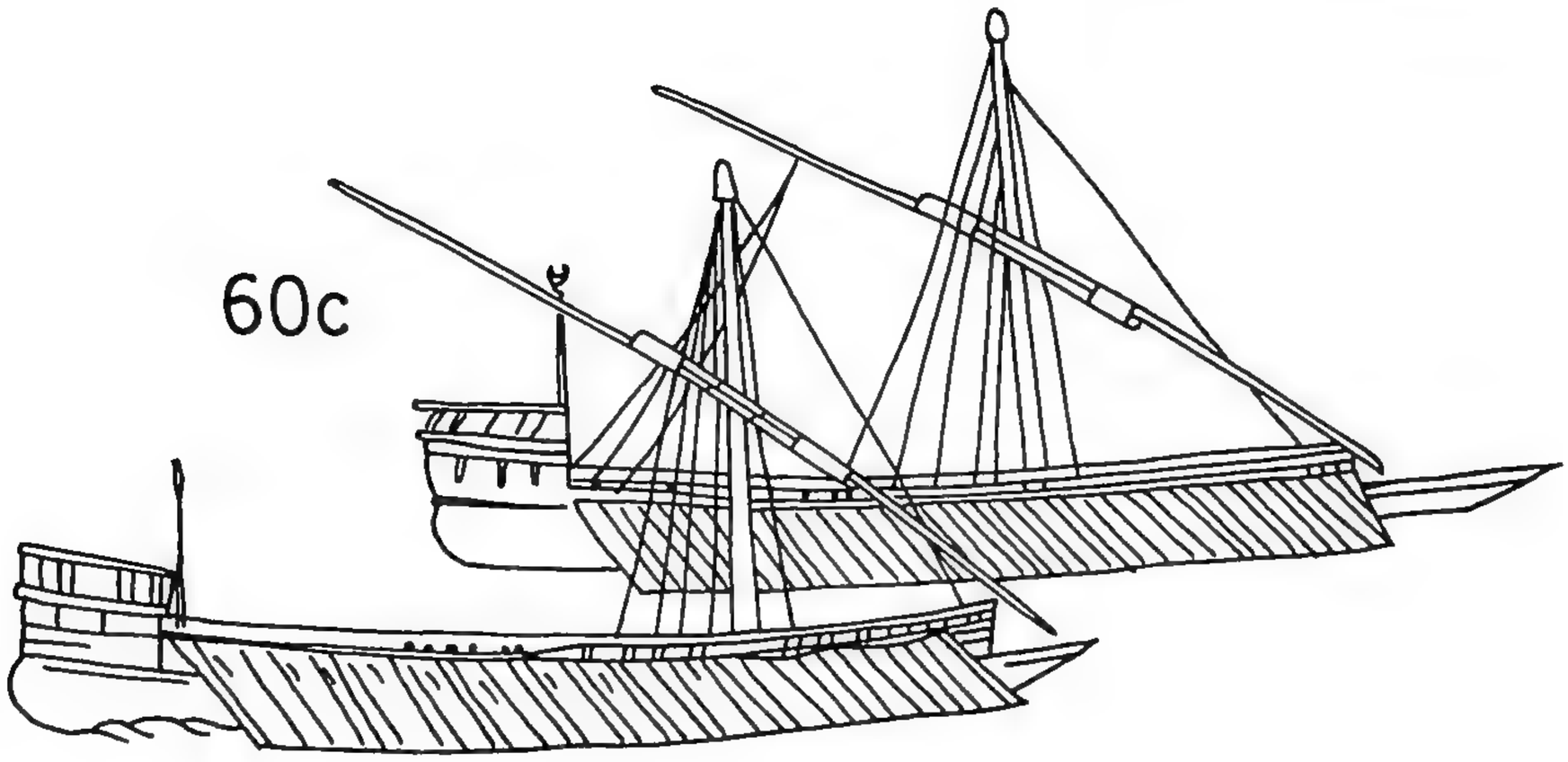


60a

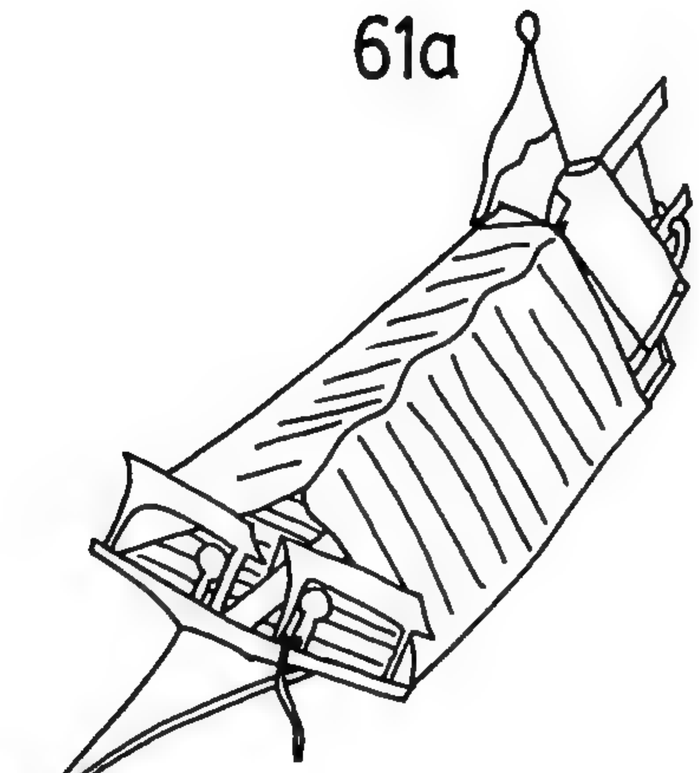
60b



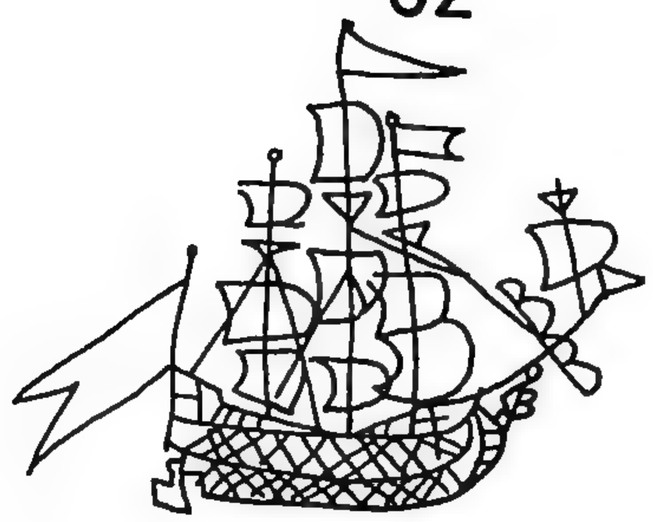
60c



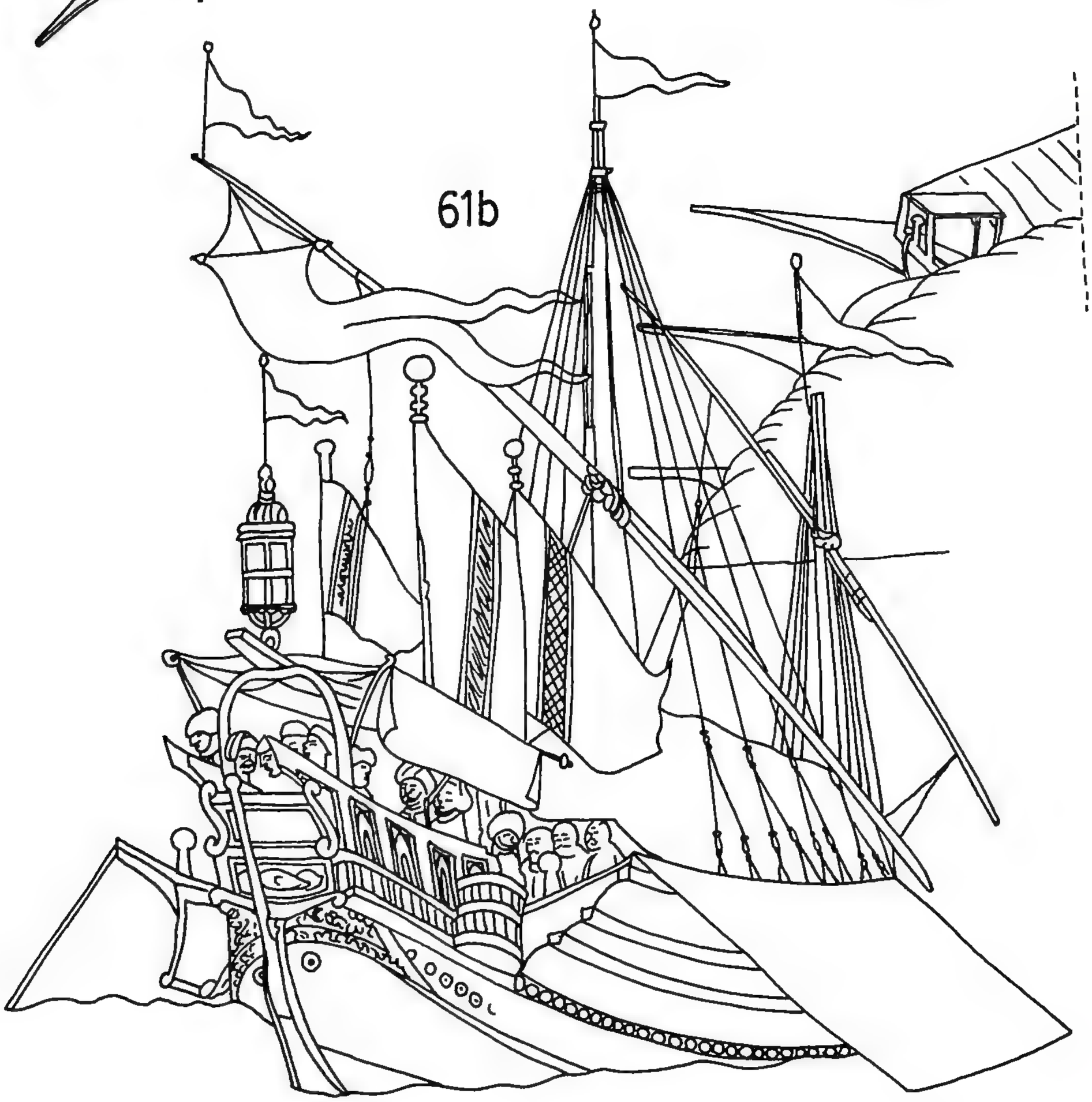
61a

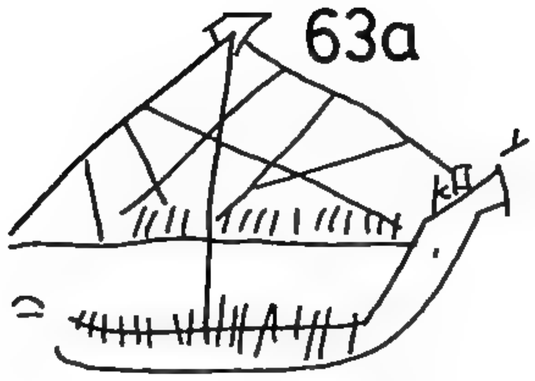


62

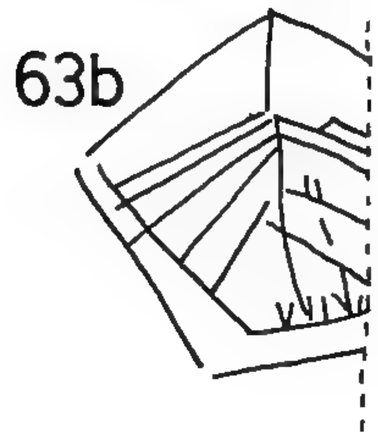


61b

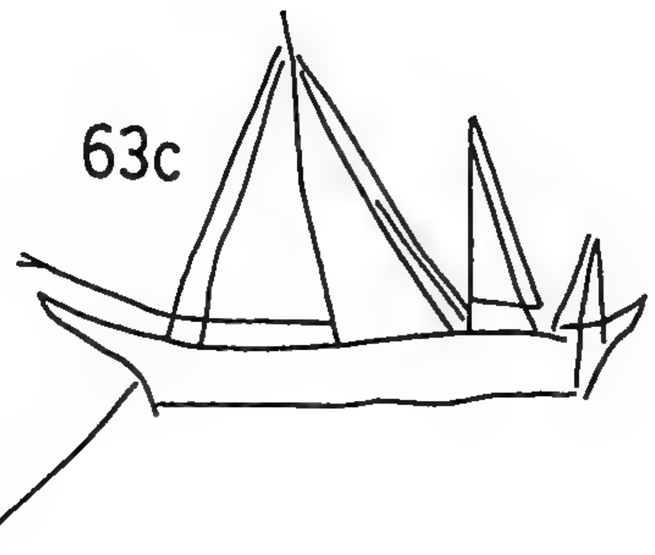




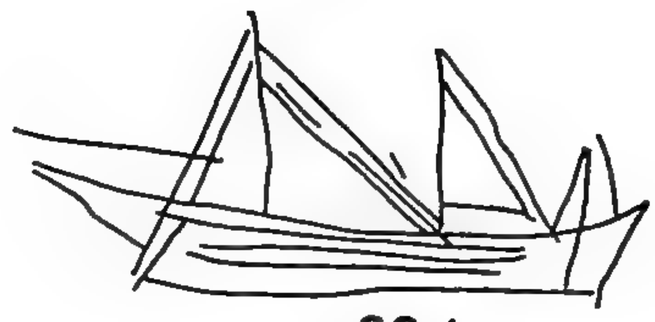
63a



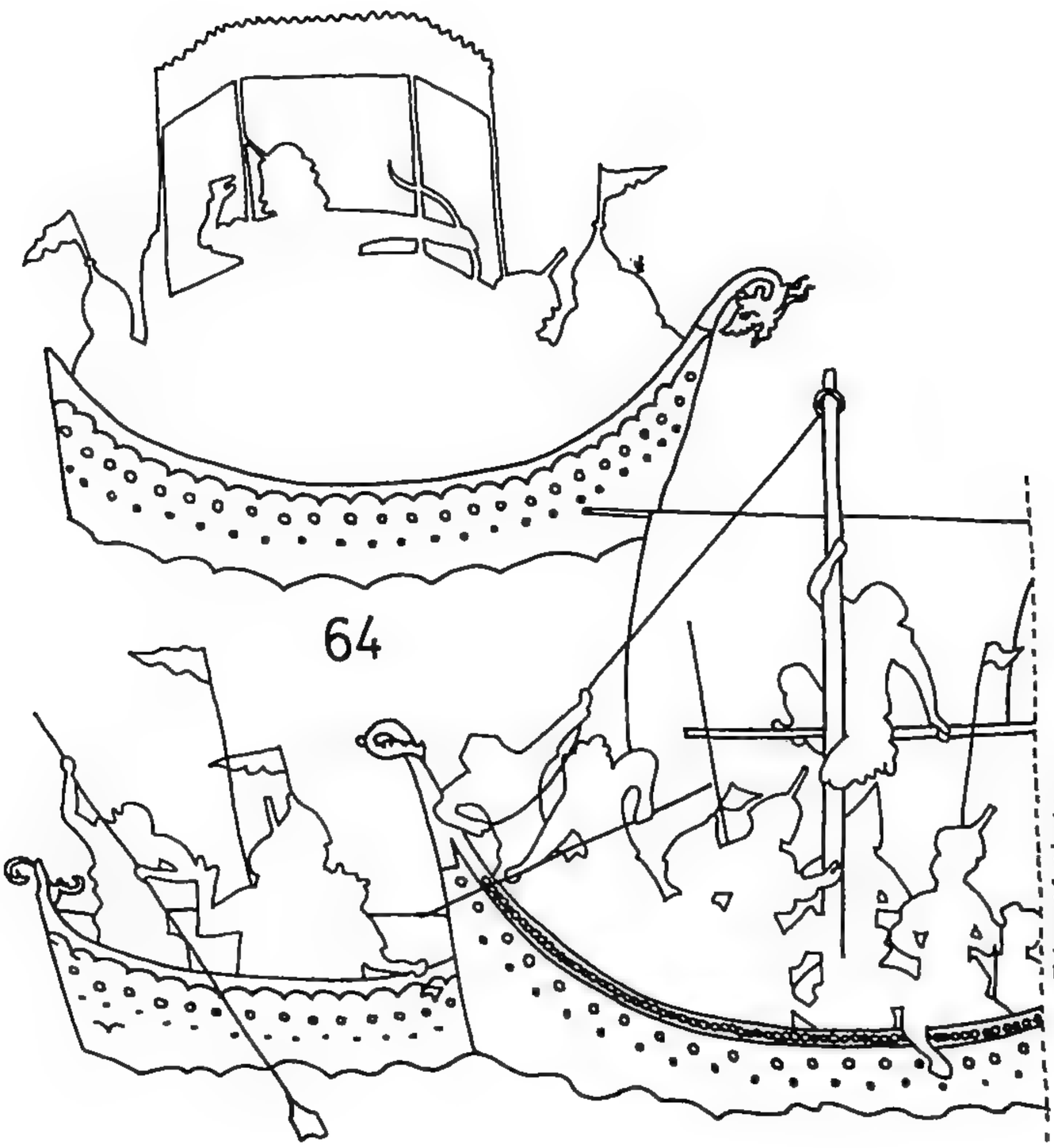
63b



63c

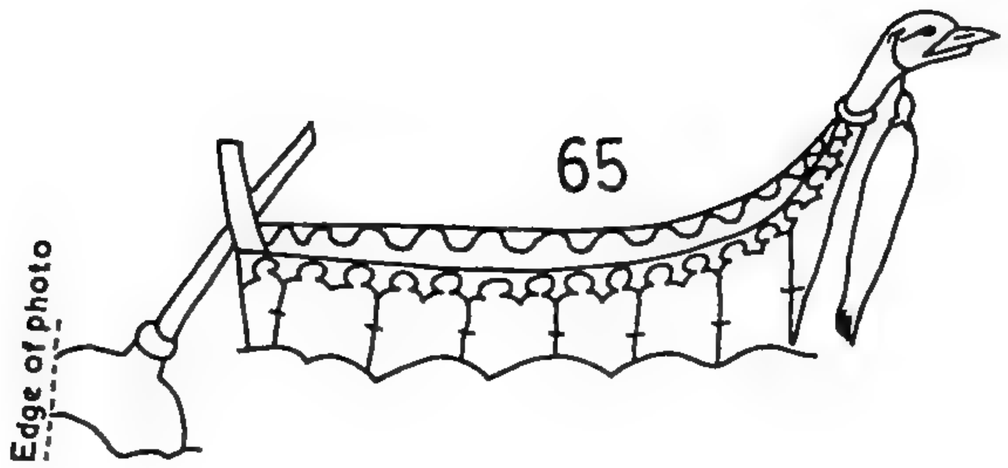


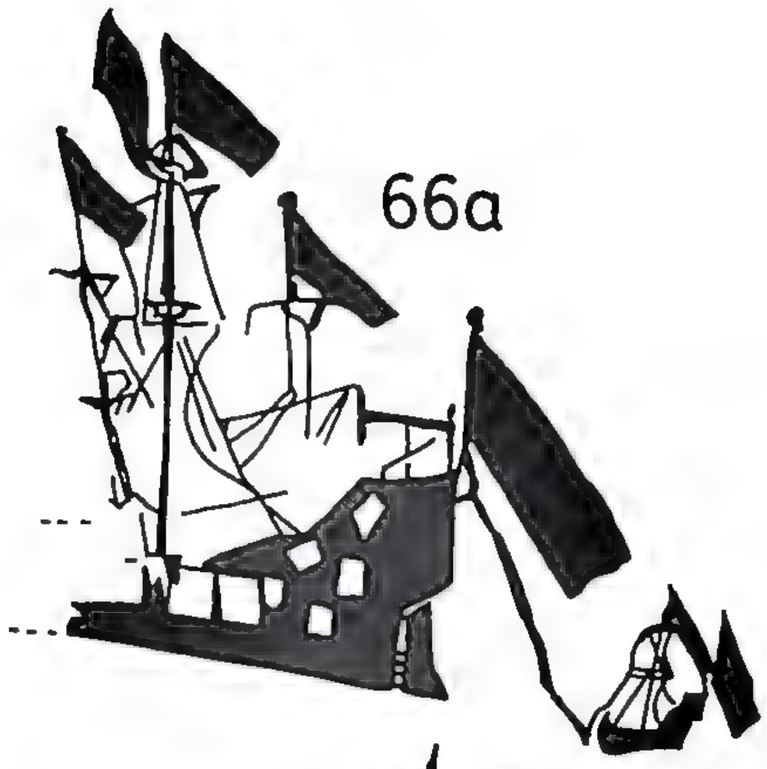
63d

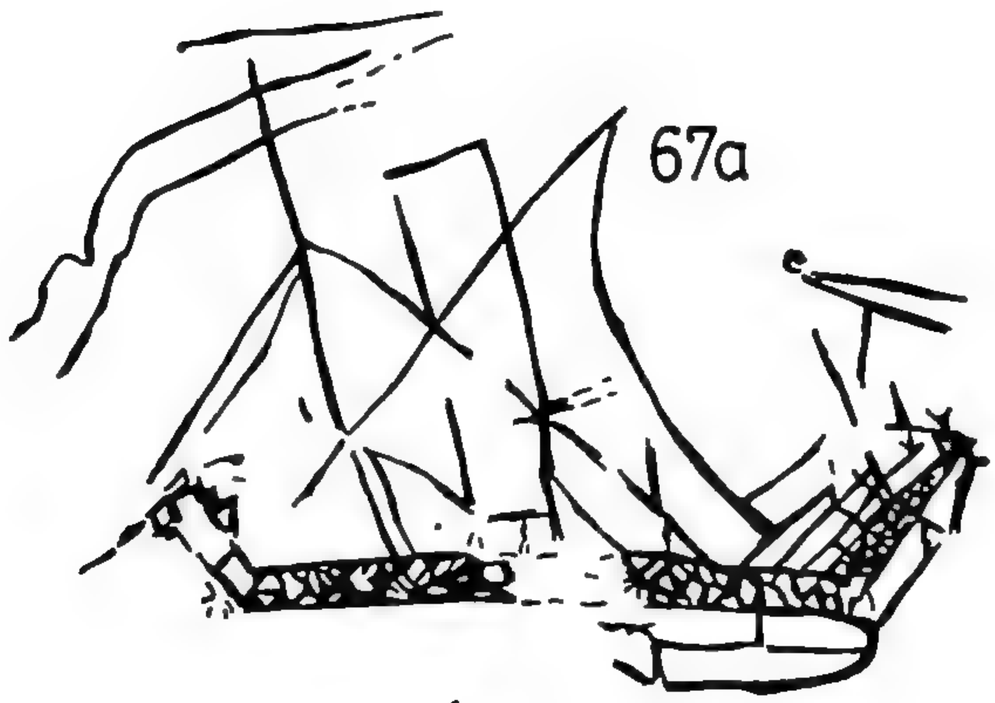


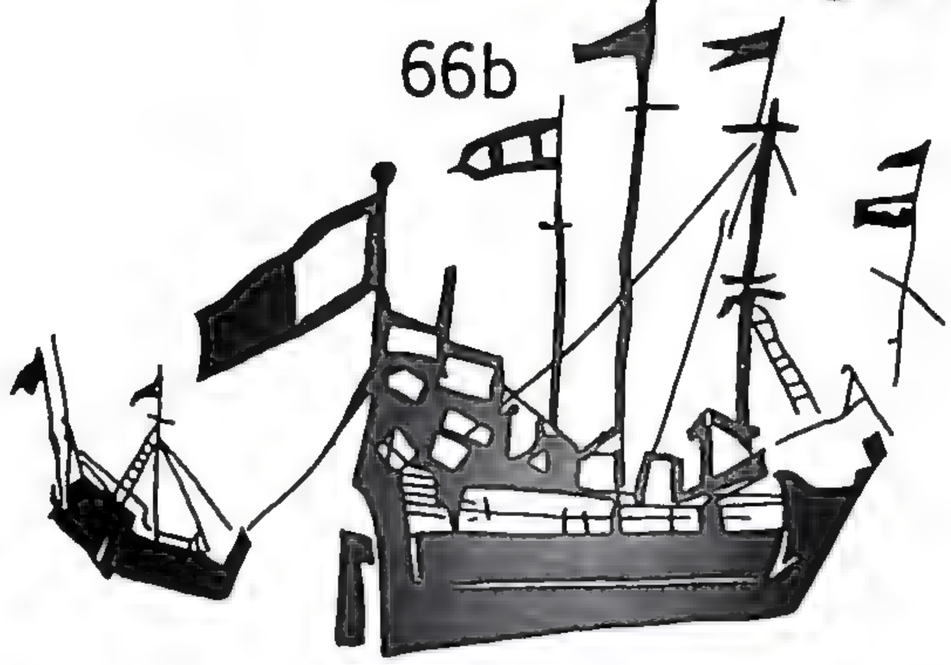
64

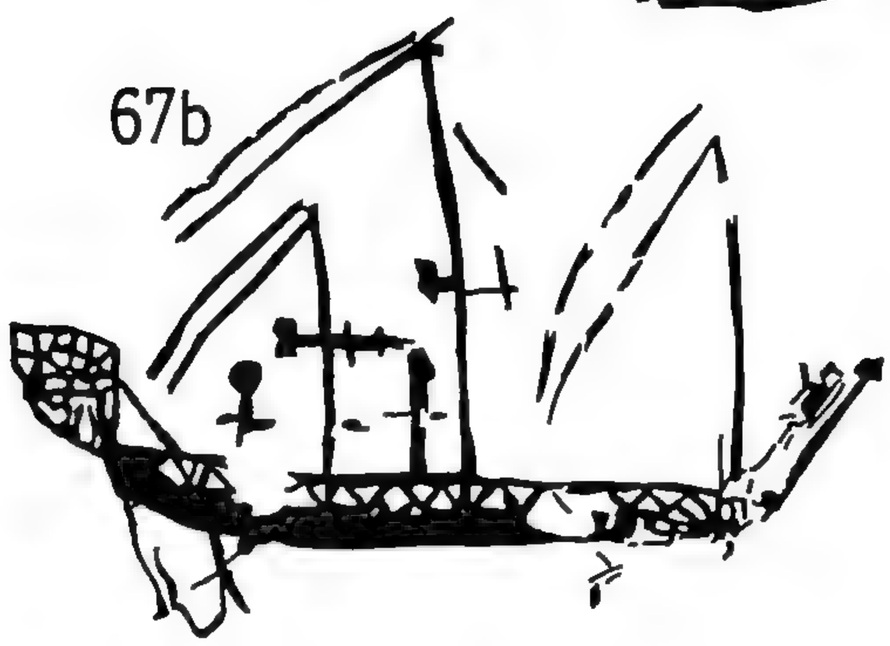
Edge of photo

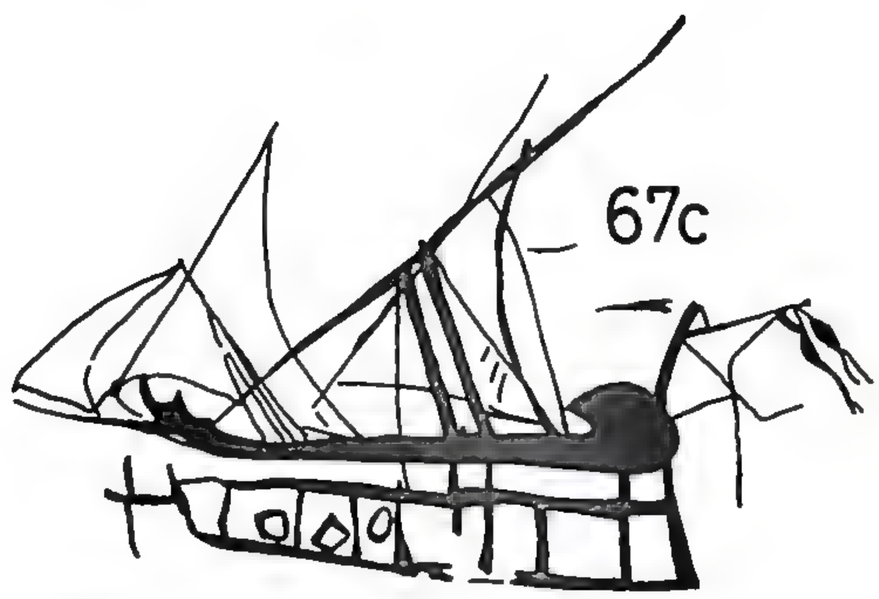

65
Edge of photo

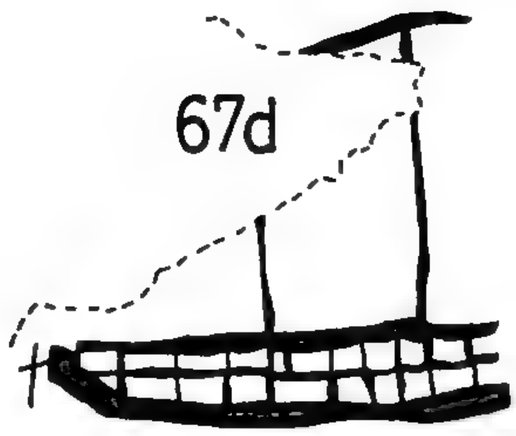

66a

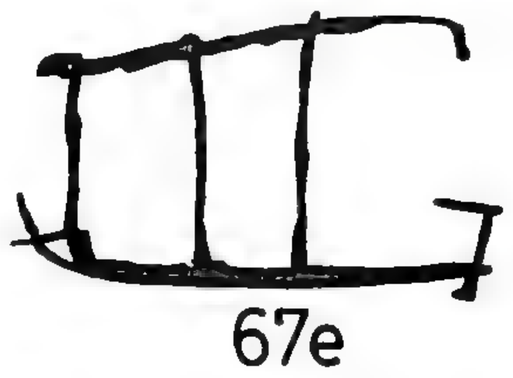

67a


66b

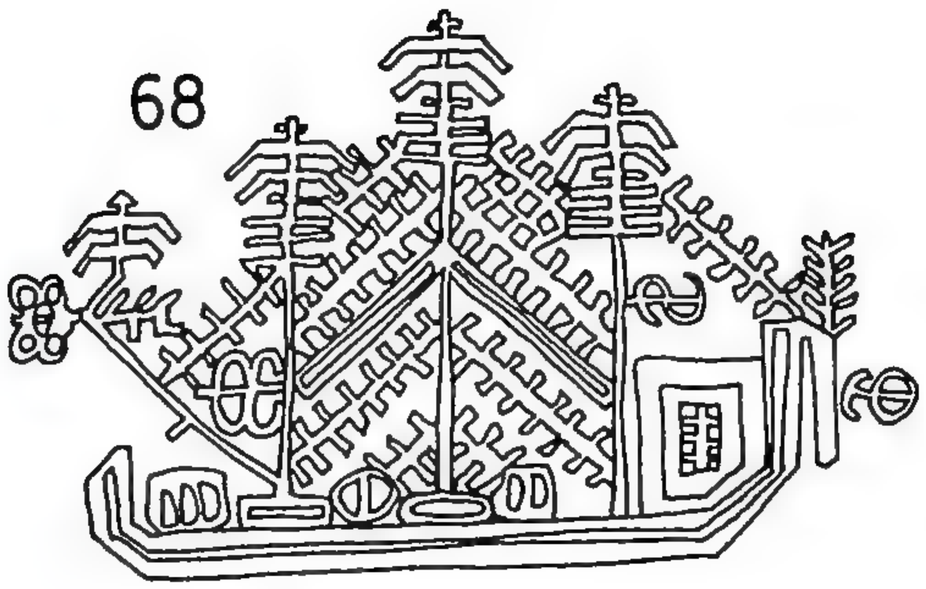

67b


67c

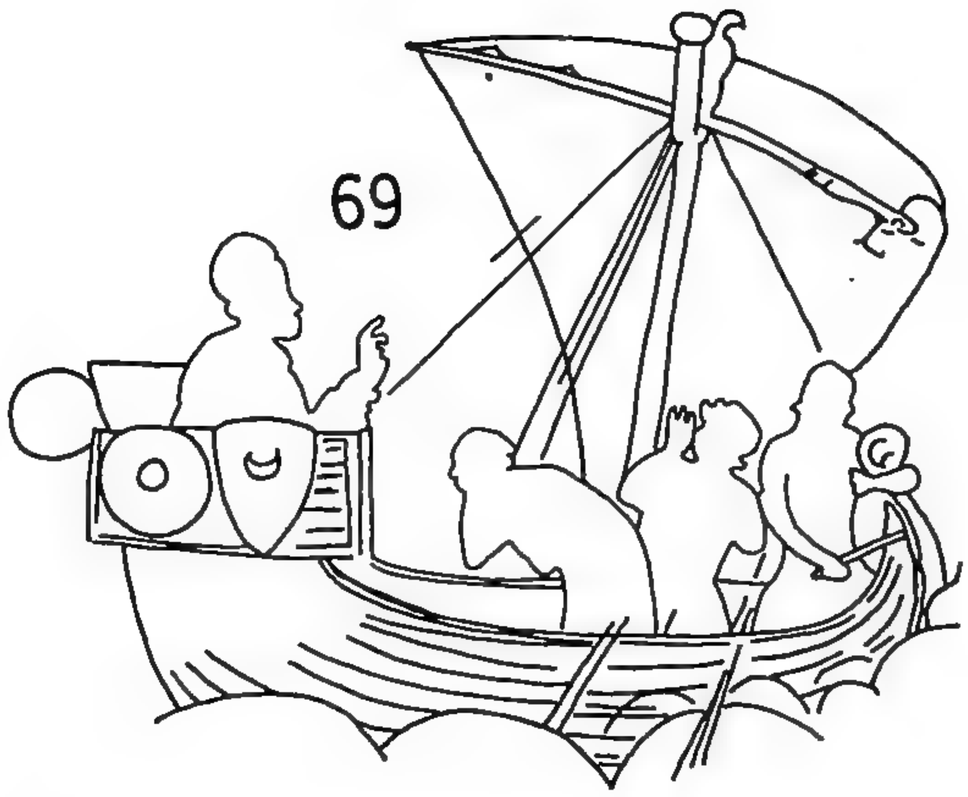

67d


67e

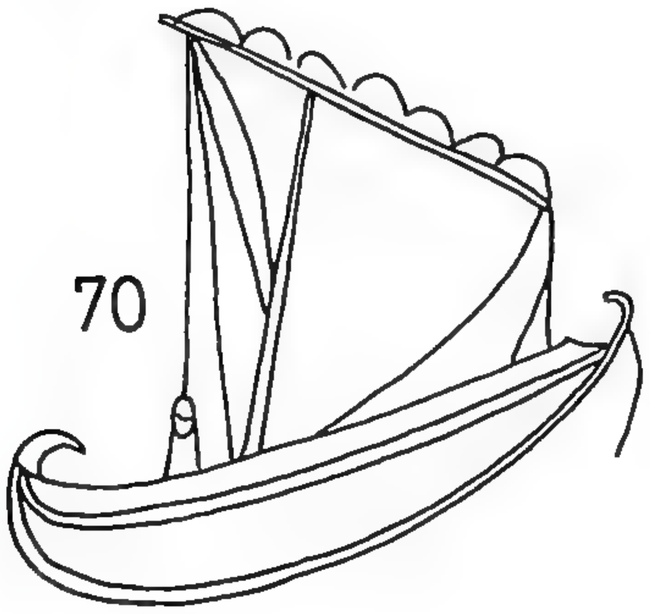
68



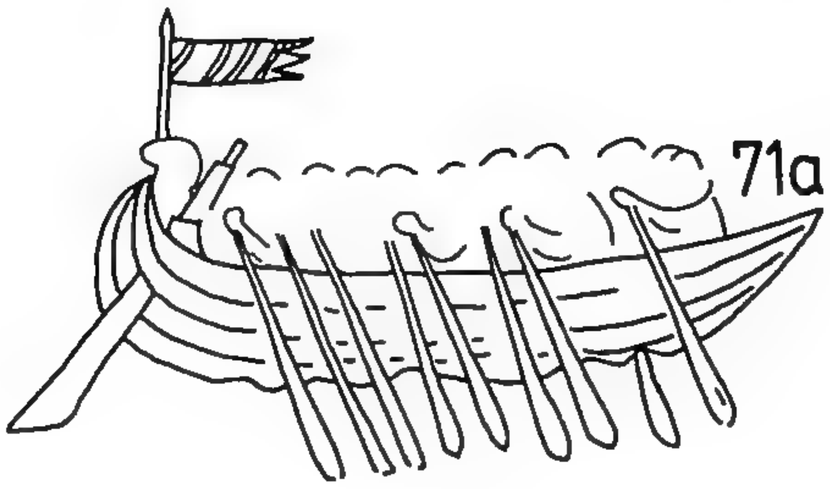
69



70



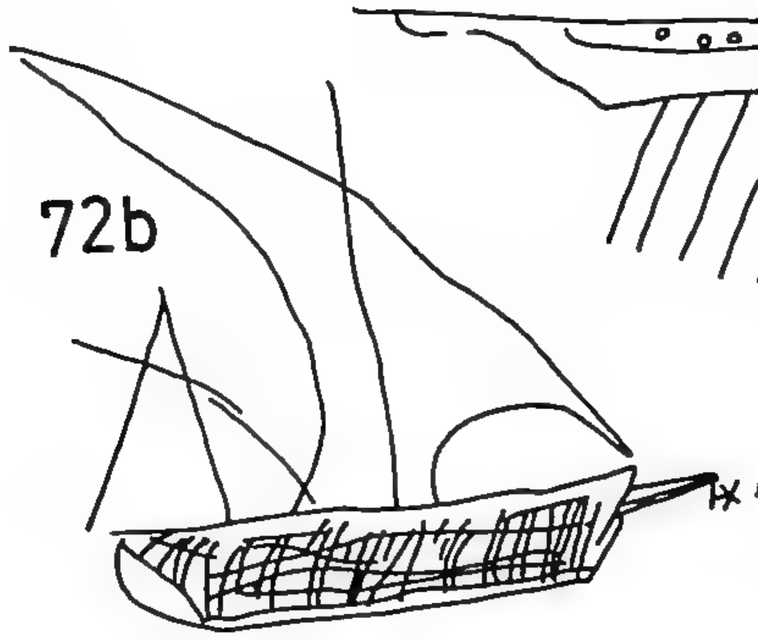
71a



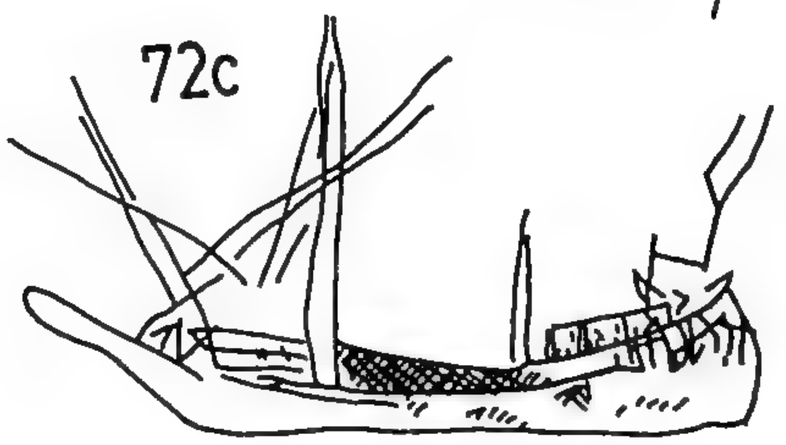
72a

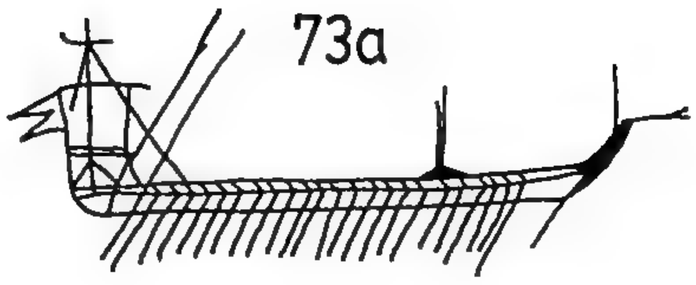
71b

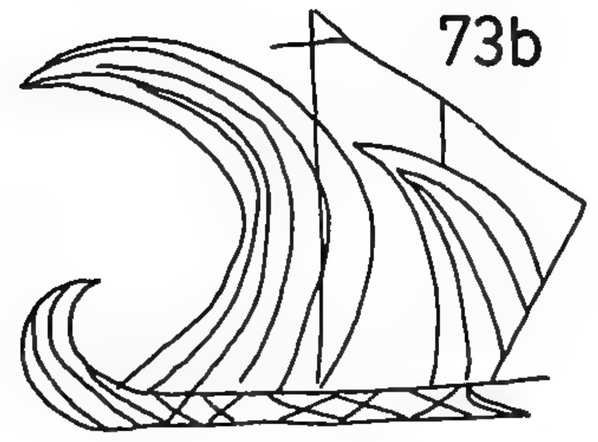
72b

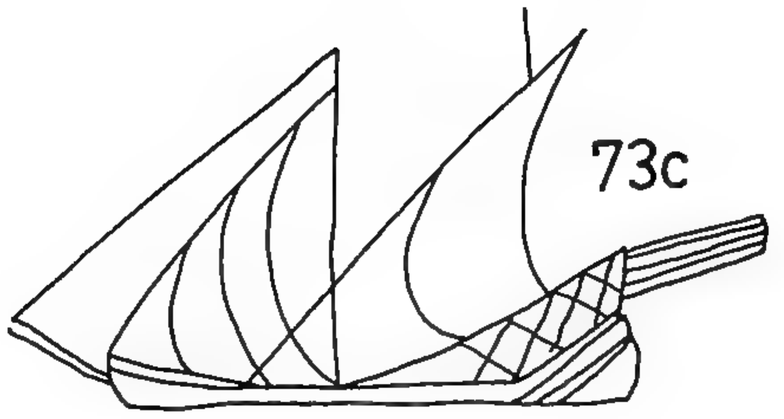


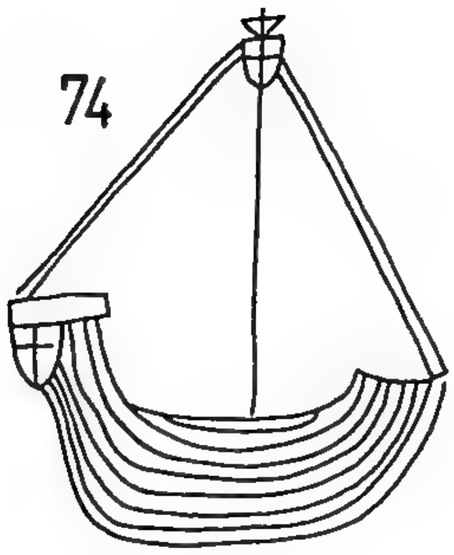
72c

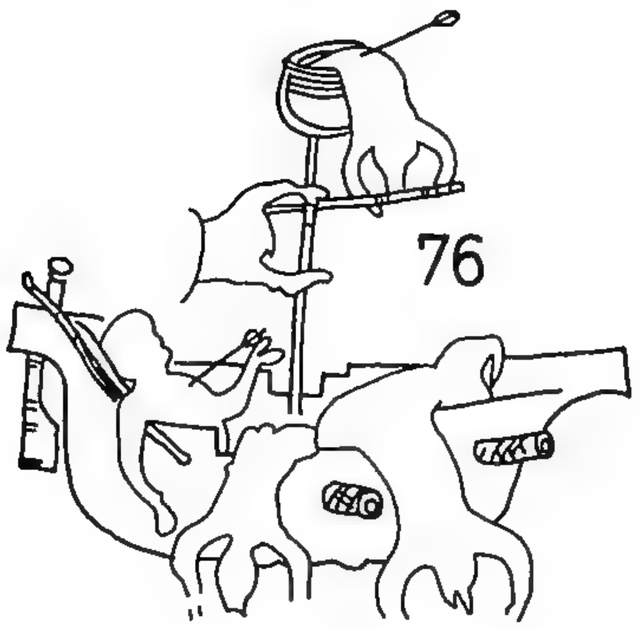


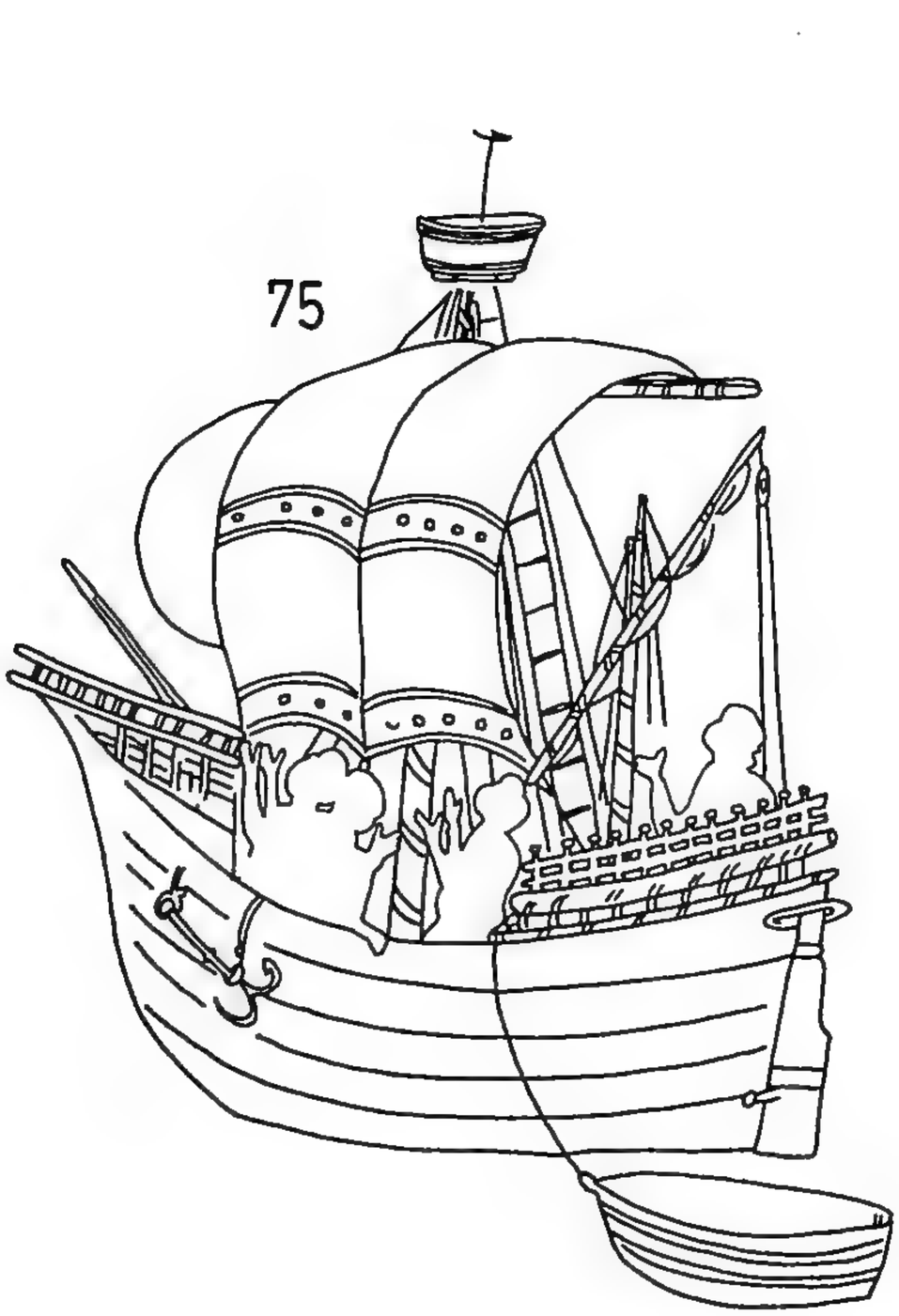

73a

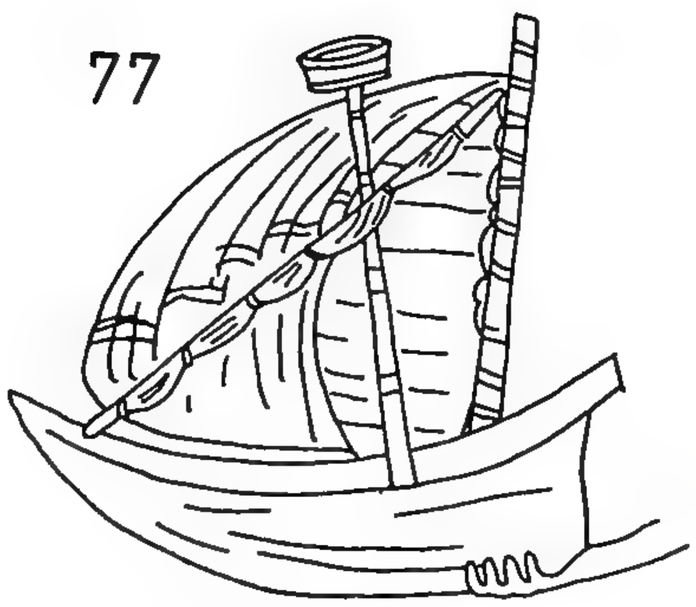

73b

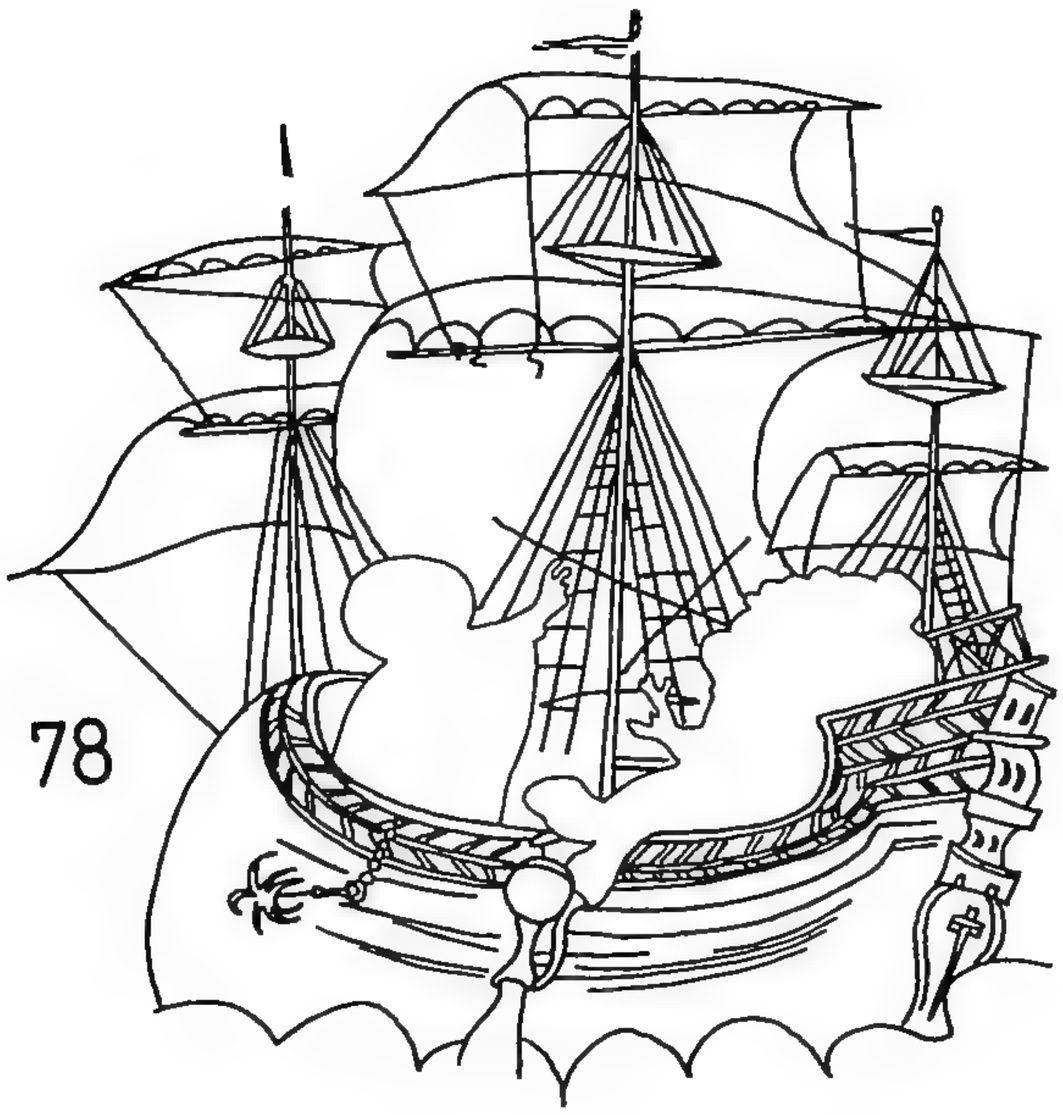

73c

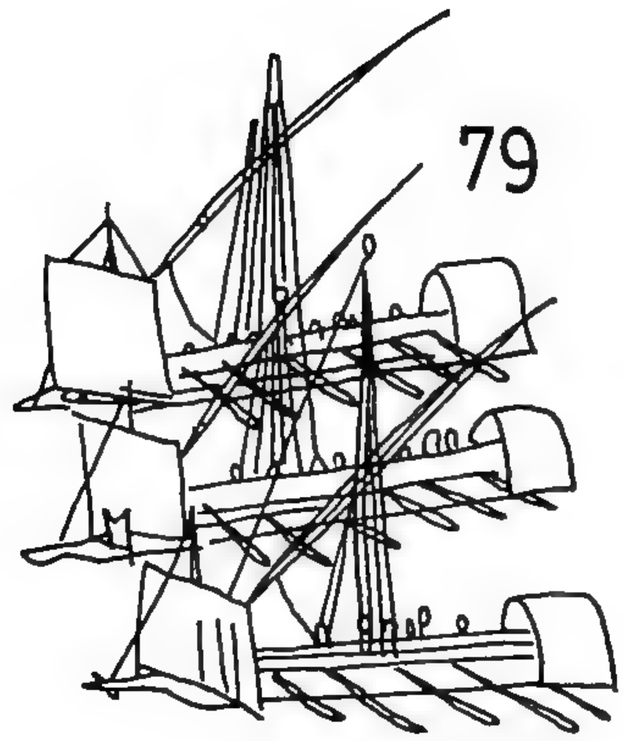

74

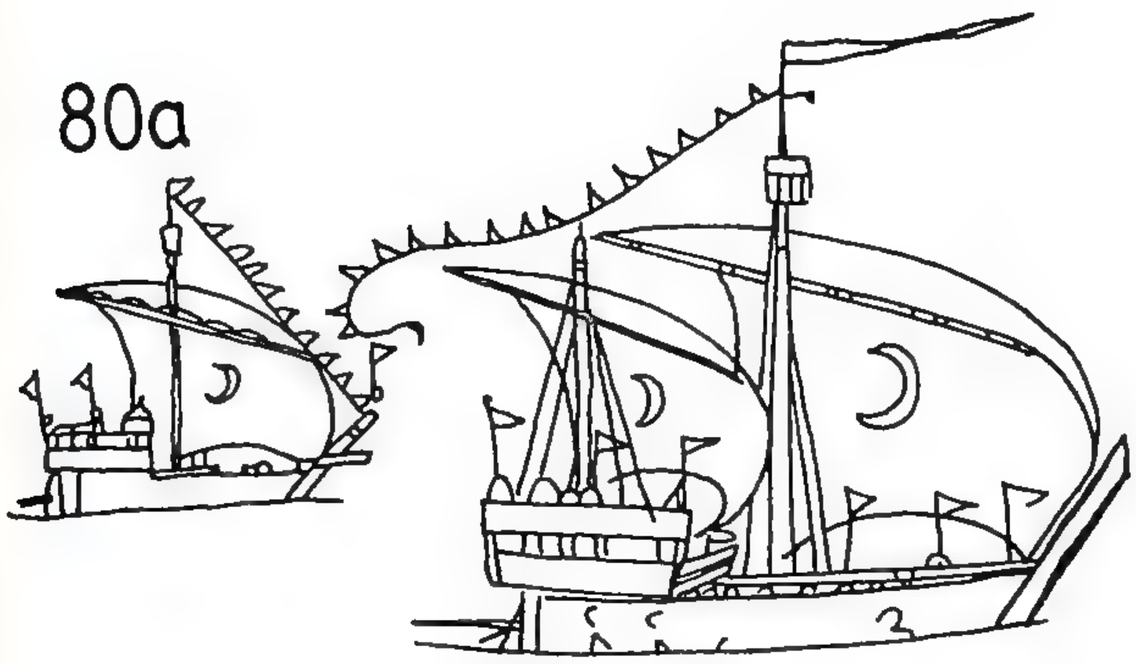

76

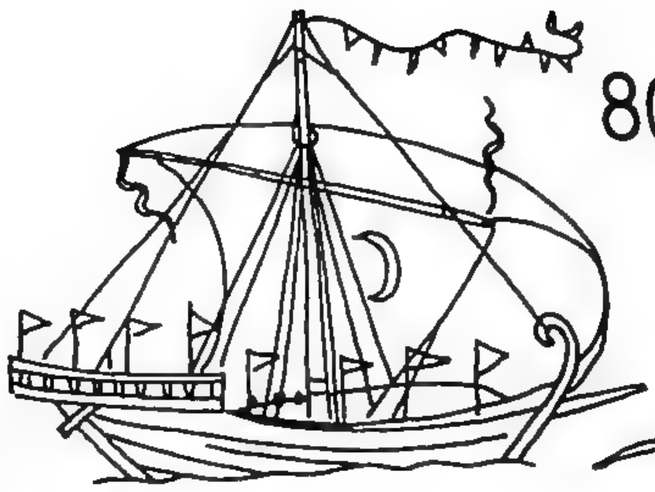

75

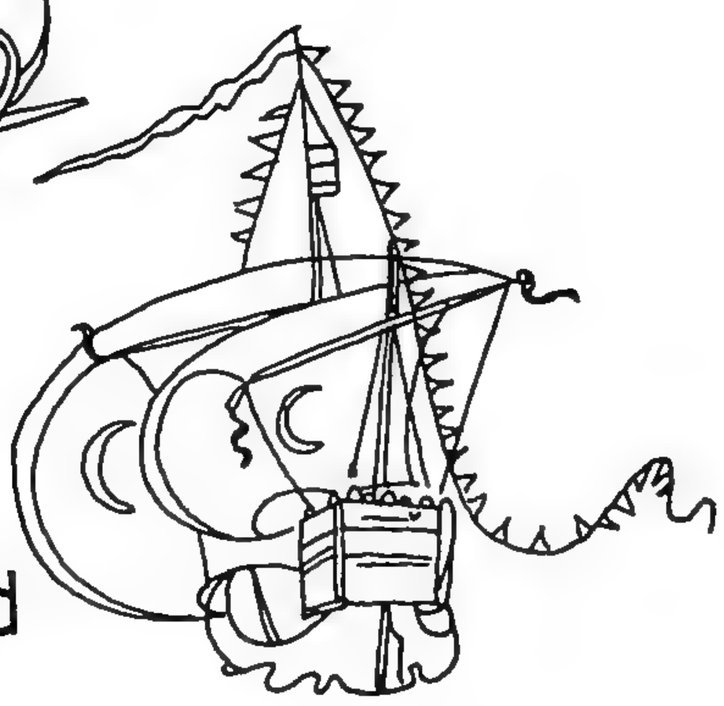

77











Dr. David Nicolle was born in London in 1944. After working for the BBC he returned to University, receiving his Ph D at Edinburg in 1983 for a doctoral thesis dealing with Islamic Military Technology from the 7th to 13th centuries. Until 1987 Dr. Nicolle taught Islamic and World Art History of Islamic Architecture at Yarmouk University, Jordan, but this year (1988) he is concentrating on academic writing and being a "house-husband" while his wife studies for her Masters Degree. Dr. Nicolle has written articles and small books on various aspects of medieval arms, armour and military organization, mostly focussing on the Middle East. A larger two-volume work on The Arms and Armour of the Crusading Era 1050-1350 *will be published by Kraus Thompson in New York in 1988.*

The Schooner Rig, Its First Appearance and Development

MERRITT A. EDSON, JR.

Maritime words normally undergo a transformation in meaning after their first appearance. This generally holds true for most maritime words, and the word **schooner** has been no exception. This word initially appeared in official correspondence written in the British colonies of the Americas during the early part of the 18th century, but was not recognized in published English works in Great Britian until after the middle of the century.

The earliest printed English definition of the word **schooner** that I know of appears in Falconer's *An Universal Dictionary of the Marine,* which was first published in 1768. My own copy of this publication is dated 1789, the sixth edition, which follows the format and word formation of the first edition. The definition in this later edition states: "SCHOONER, a small vessel with two masts, whose main-sail and fore-sail are suspended from gaffs reaching from the mast towards the stern; and stretched out below by booms, whose foremost ends are hooked to an iron, which clasps the mast so as to turn therein as upon an axis, when the after-ends are swung from one side of the vessel to the other." The Falconer dictionary edition of 1815, as revised by William Burney, adds the following phrase to this definition: "This vessel is generally a fast sailer, and principally employed in trade by those who make speculations where dispatch is requisite." The illustration of the vessel captioned as a schooner in both editions show a two masted vessel with fore-and-aft boom and gaff sails on both fore and main masts, as well as a square topsail each on both the fore and main masts. Each illustration shows three head sails, or, jibs as well. Thus these engravings indicate that at this early date (1768), to be a schooner, the vessel **must have at least one square sail on either the fore mast or the main mast, with probably two in most cases.**

We are limited in our discussion of this word as it does not appear in any known English marine dictionary prior to the first edition of Falconer. We do know

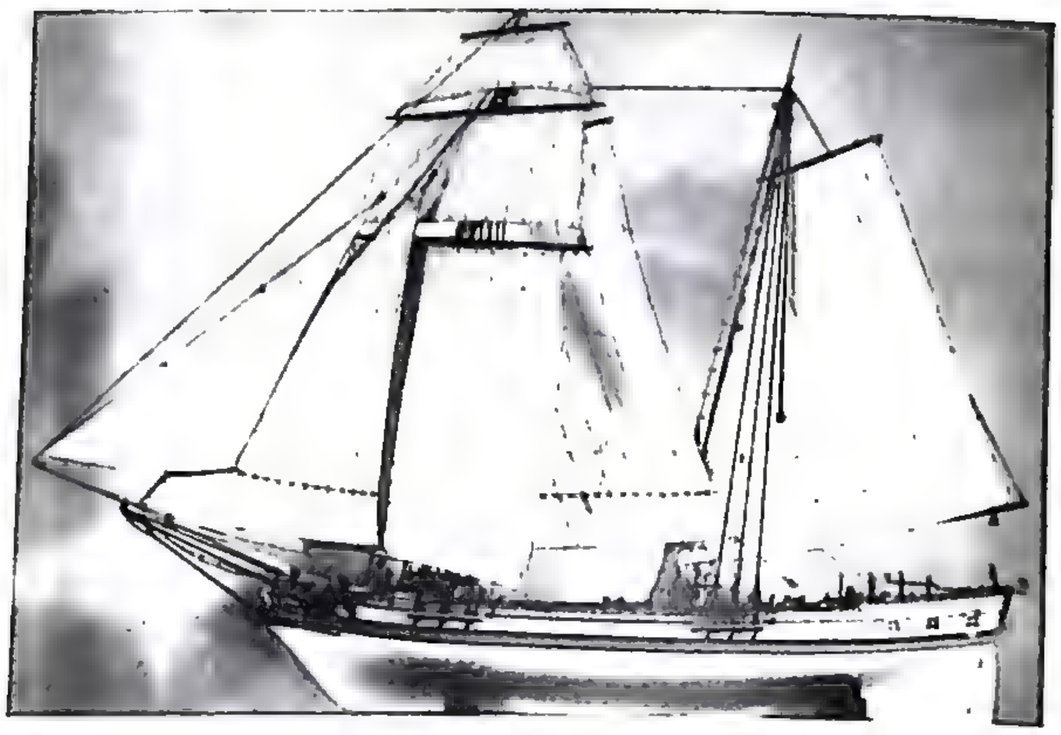


Plate 1. A modern model of the "Schooner *St. Ann,* 1736," after the reconstruction by Howard I. Chapelle. The scale of this model is 3/8" = 1'0".

that a word very similar to our current spelling of the word does appear in American colonial written records during the early part of the 18th century, and it was applied to some form of inter-island trading vessel for that period, one that appears to have been devised for ocean trading and required **at least one square sail** in its collection of sails for the craft, the majority of which were fore-and-aft sails. One example is the appearance of a vessel that was first called a **shallop,** named *Tryall,* a two masted fore-and-aft vessel furnished with a jib sail, which, on occasion, was later also called a **schooner** when it was equipped with at least one square sail on one of its two masts, both of which set fore-and-aft sails, as well as some form of jib sails set ahead of the fore mast.

It might be wise to consider several of the known English definitions of the word schooner as well as take a side step and look at what the French of the late 18th century thought this term meant. The first English maritime dictionary in book form was published in 1627 titled *A Sea Grammar,* written by Captain John

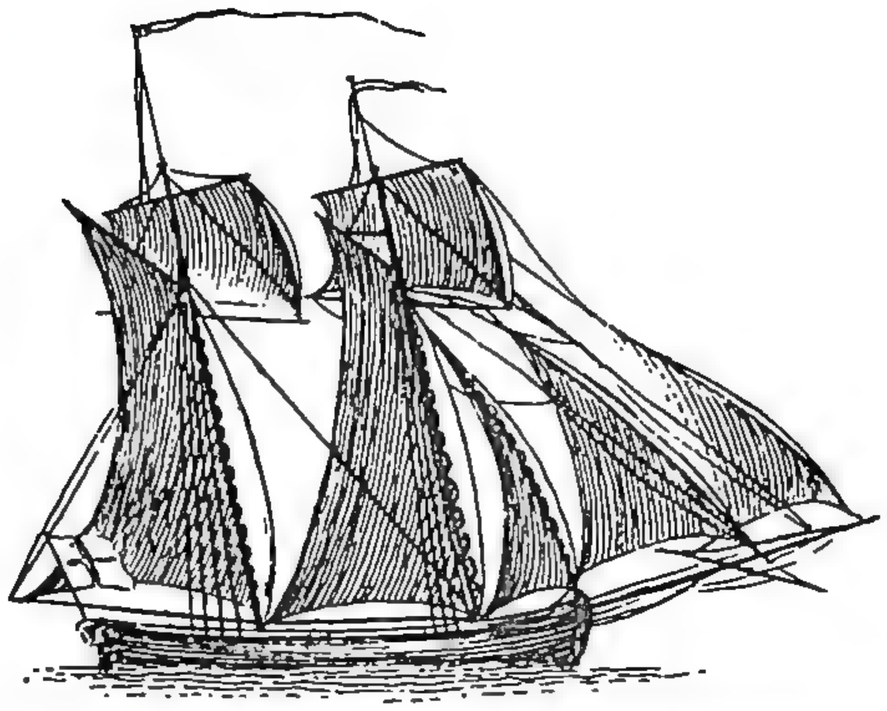


Figure 1. Schooner illustration from Falconer's 6th edition of his *An Universal Dictionary of the Marine*, published in England.

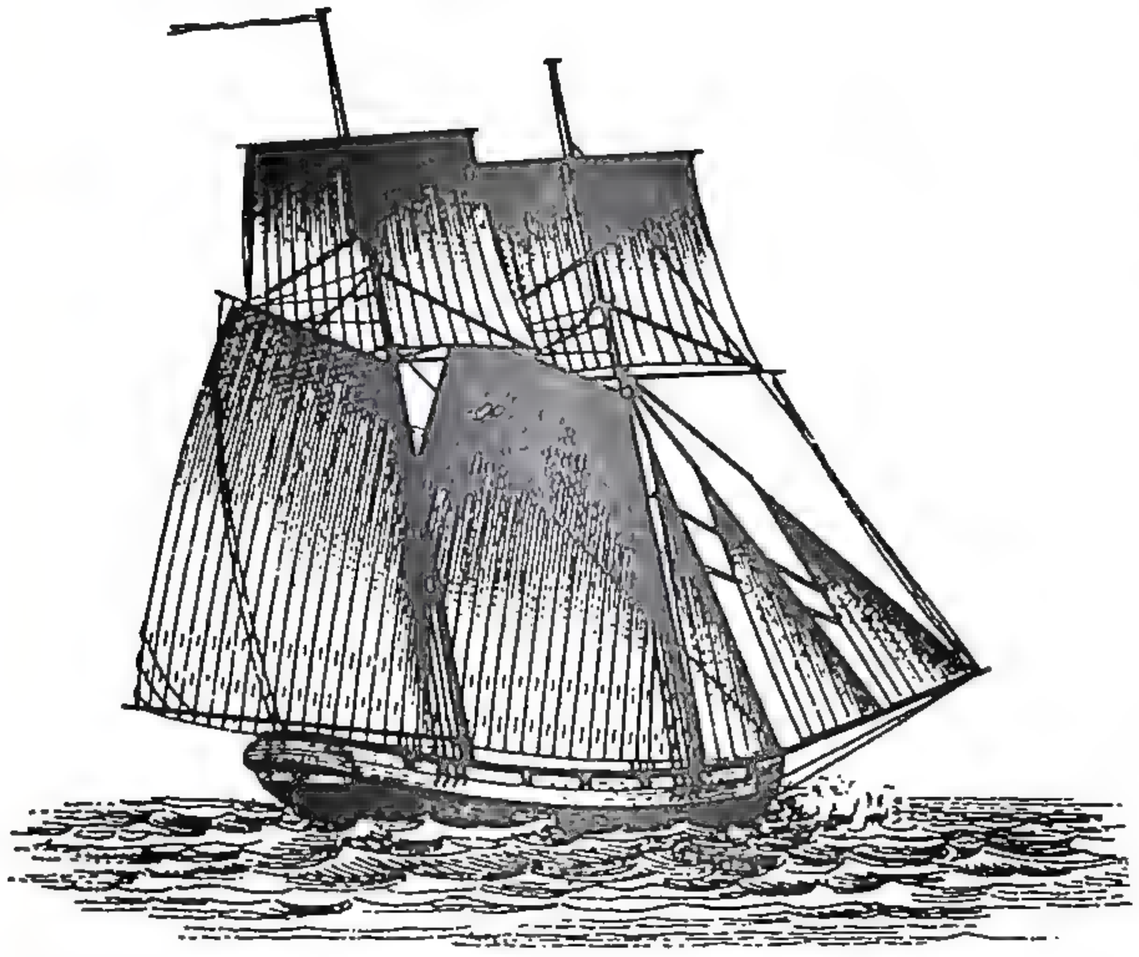


Figure 2. Illustration of a schooner from Falconer's revised dictionary edition of 1815.

Smith. This went through several editions, which remained basically the same. No mention is made in this book of the vessel called a schooner. John Smith does discuss such types as the 3-masted ship, the long boat, a shallop, and a skiffe. Later in the 17th century a book titled *The Seamans Dictionary,* written by Sr. Henry Manwayring, London, 1644, appeared. Again, there is no mention of a craft called a schooner, just a ship, a boat, a long boat, a shallop, and a skiffe. A third book appeared in 1685 titled *Six Dialogues about Sea Services. . . ,* Nathaniel Boteler Esq., which was printed in London. Initially completed about 1634, this book was printed with only minor additions based on this earlier manuscript. Again, the word schooner does not appear in the text, but only references to the ship, the boat, the shallop, the barge, and similar small craft known to have existed during this period.

During the first part of the 18th century, several books dealing with English shipbuilding appeared written by William Sutherland (1711 & 1717), and a book on rigging of ships by one John Davis titled *The Seaman's Speculum,* London, 1711. Again, none mention the vessel type schooner. About mid-century a book on shipbuilding appeared written by Mungo Murray titled *A Treatise on Ship-building and Navigation in Three Parts*. The first edition appeared in 1754, while the second edition appeared in 1765. Again, no mention is made of the vessel type called schooner, though a bilander is mentioned as well as a couple of sloops, a smack and a brig. It appears wise to indicate again that the earliest known English definition of the word schooner does not appear until 1768 in the first edition of Falconer's marine dictionary published that year, as well as the subsequent reprints of this edition which appeared until the book was revised in 1815.

The next publication which provides a definition of the word schooner is found in a book written by M. Lascallier titled *Vacabulaire des Terms de Marine, Anglois et Franciois,* A Londres, 1783, called a new edition. This printing appears to be the second edition of the work, which apparently was first published in 1777. This definition accompanies an illustration of a schooner which shows a two masted fore-and-aft rigged vessel which has three jib sails, two gaff and boom rigged sales, one on the fore mast the second on the main mast, with two square yards rigged just below the mast tops, as well as a main stay sail set flying. The definition reads as follows: "*Figure* 124, GOELETTE. Petit bâiment fort usité parmi les Anglois, sur-tout ceux d'Amérique, & dans nos colonies d'Amérique, &c. Les goelettes sont de cinquante, cent tonneaus, ou quelquefois plus; elles portent deux mâts inclinés fur l'arriere, dont chacun porte une voile en forme de trapeze, semblable a la grande voile d'un brigantin ou d'un cutter. *Voyez* a l'article BRIGANTIN, *page* 26.

"Outre ces deux voiles principales, il y a ordinairement vers l'avant, deux ou trois focs; on ajoute quelquefois a chacun des mâts, un hunier volant. Ce batiment et tres-propre a aller au plus pres du vent, par la forme des ses voiles & sa construction: lorsqu'il court vent arriere, il a une voile de fortune quarrée."

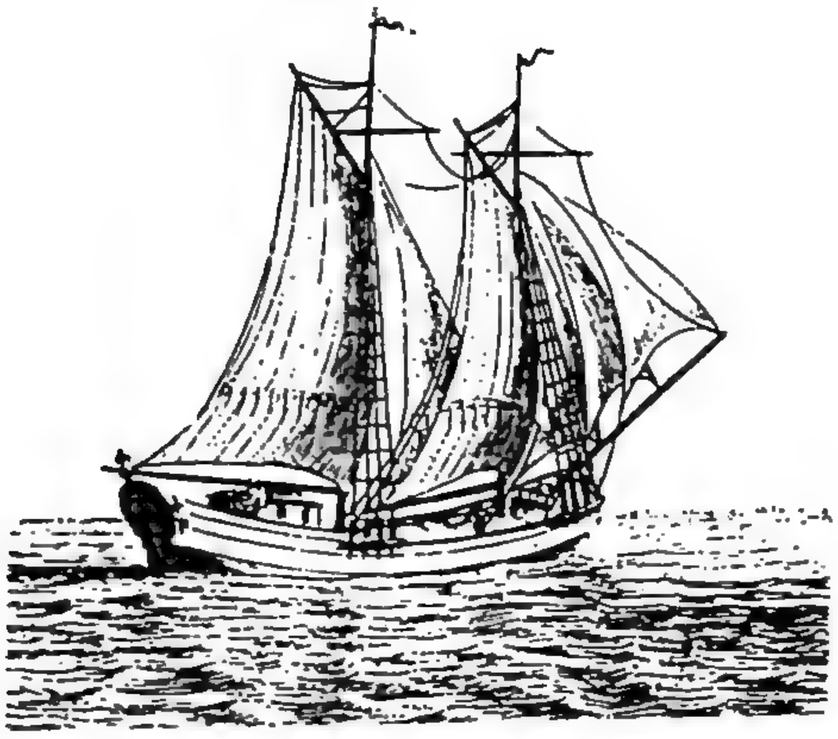


Figure 3. The schooner illustration found in *Vocabulaire des Term de Marine, Anglois et Francois,* Lascallier, A Londres, 1783.

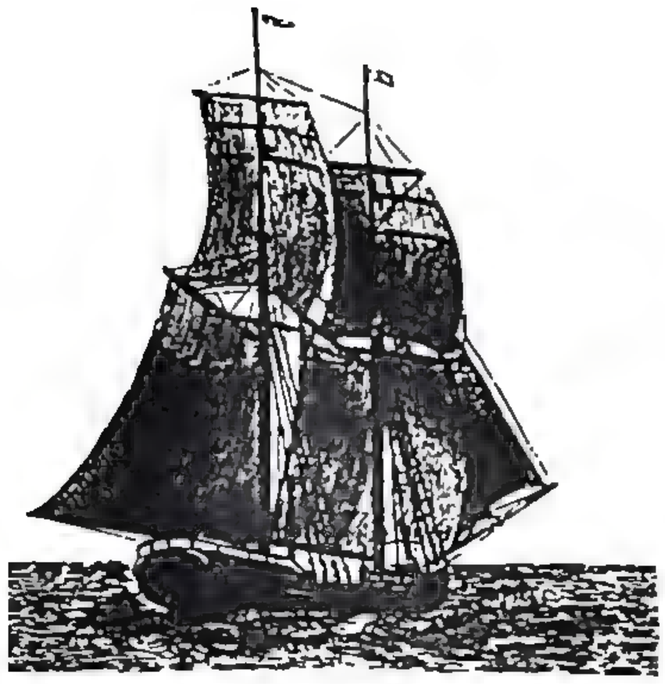


Figure 4. Schooner depicted in *The Elements and Practice of Rigging and Seamanship,* David Steel, London, 1794.

Roughly translated the text reads: "*Figure* 124, GOELETTE [schooner]. A small sturdy vessel found among the English, built initially in the Americas, as well as within our colonies in America, &c. These schooners are about fifty feet in length, of one hundred tons, sometimes more; they have two aft sloped masts, each with a sail in the form of a trapeze, which looks like the main sail of a brigantin or a cutter. See the article BRIGANTIN, *page* 26.

"Besides these two primary sails, there are generally two or three jib head sails, as well as sometimes a topsail set flying on both masts. These vessels can sail near to the wind due to the form of its sails and its hull construction, and are quite successful."

The definition of BRIGANTIN found on page 26 reads: "(Subst. m. du Francois BRIGAND.) *A brig* or *brigantine:* (Vid. *fig.* 33, *pl. 5 Part. II.*)."

This definition by a Frenchman is quite interesting as it assigns the development of the schooner to colonial America, which he also indicates was the major area for its construction for use by other nationalities including France.

Following the Falconer definition, first published in 1768, the next English book that provides a definition of a schooner is that written and published by David Steel, which is found in the book titled *The Elements and Practice of Rigging and Seamanship,* in two volumes. The first edition appears in London during the year 1794, seventeen years after the first appearance of the Lescallier publication in France.

This definition is located on page 221 under the subtitle of "Progressive Method of Rigging Two-Mast Vessels." It reads as follows: "SCHOONER. Is a small vessel with two masts and a bowsprit. The masts rake aft, but the bowsprit lies nearly horizontal. On the bowsprit are set two or three jibs: on the foremast a square foresail; and, abaft the foremast, a gaff or boomsail; and above those a topsail. Abaft the main-mast is set a boom-sail, and above it a topsail. The main-stay leads through a block, at the head of the foremast, and sets up upon deck by a tackle. By these means, the sail abaft the foremast is not obstructed when the vessel goes about, as the peek passes under the stay.

"Schooners sail very near the wind, and require few hands to work them. Their rigging is light, similar to a ketch's, and the topmasts fix in iron rings, abaft the lower mast-heads."

The illustration of the schooner in this edition shows a two masted vessel with two jib sails set, a gaff-boom sail set on both fore and main masts, as well as two topsails set on square yards, one on each mast. This illustration also shows a lower square sail set on the foremast as well. This provides a total of seven sails.

It might be wise at this point to consider the appearance of known illustrations that would show what appear to be early schooners with square sails. The earliest date of such a print is a drawing of New York made by one William Burgis published in 1717 which may show a possible schooner being equipped found in the middle of the right side of the drawing. This appears to be a two masted vessel, just launched, being

fitted out with its masts, rigging, and sails. Unfortunately, only the after most mast, or main mast, is in place, though there is an indication that a fore mast was also to be fitted as the work progressed. The next illustration that I know of was published in 1725 showing the waterfront of the city of Boston, also drawn by William Burgis, which indicates one topsail schooner in the middle of the print. Unfortunately, all its yards are down, and none of the sails are attached, but the drawing appears to represent a topsail schooner of the period. A series of three drawings dated 1765-1766 of the colonial schooner *Baltic* also exist. Copies can be found in the Peabody Museum of Salem. Plate 1 is a modern interpretation of her rig.

It should be pointed out that a purely fore-and-aft three sail rig is known to have appeared even earlier in Holland. This supposition is based on three engravings that appeared in Dutch works published variously in 1628, 1648, and prior to 1678. I feel these drawings represent normal developments of what the English called the **shallop**, initially a small two sail boat type, but expanded as time went on into a three sail rig suitable for sailing ocean waters. Even Carmarthen's *Royal Transport* built in 1695, an English designed and constructed vessel, would represent the development of a shallop rig for a larger vessel, and would have been based on known and proven design standards of the period. This same three sail rig is also found in the two drawings of Burgis mentioned above. So this shallop rig was well known to the European community and was fairly widely distributed by the first part of the 18th century.

But the words **scoon, scooner,** or **schooner,** do not appear until the first part of the 18th century. They

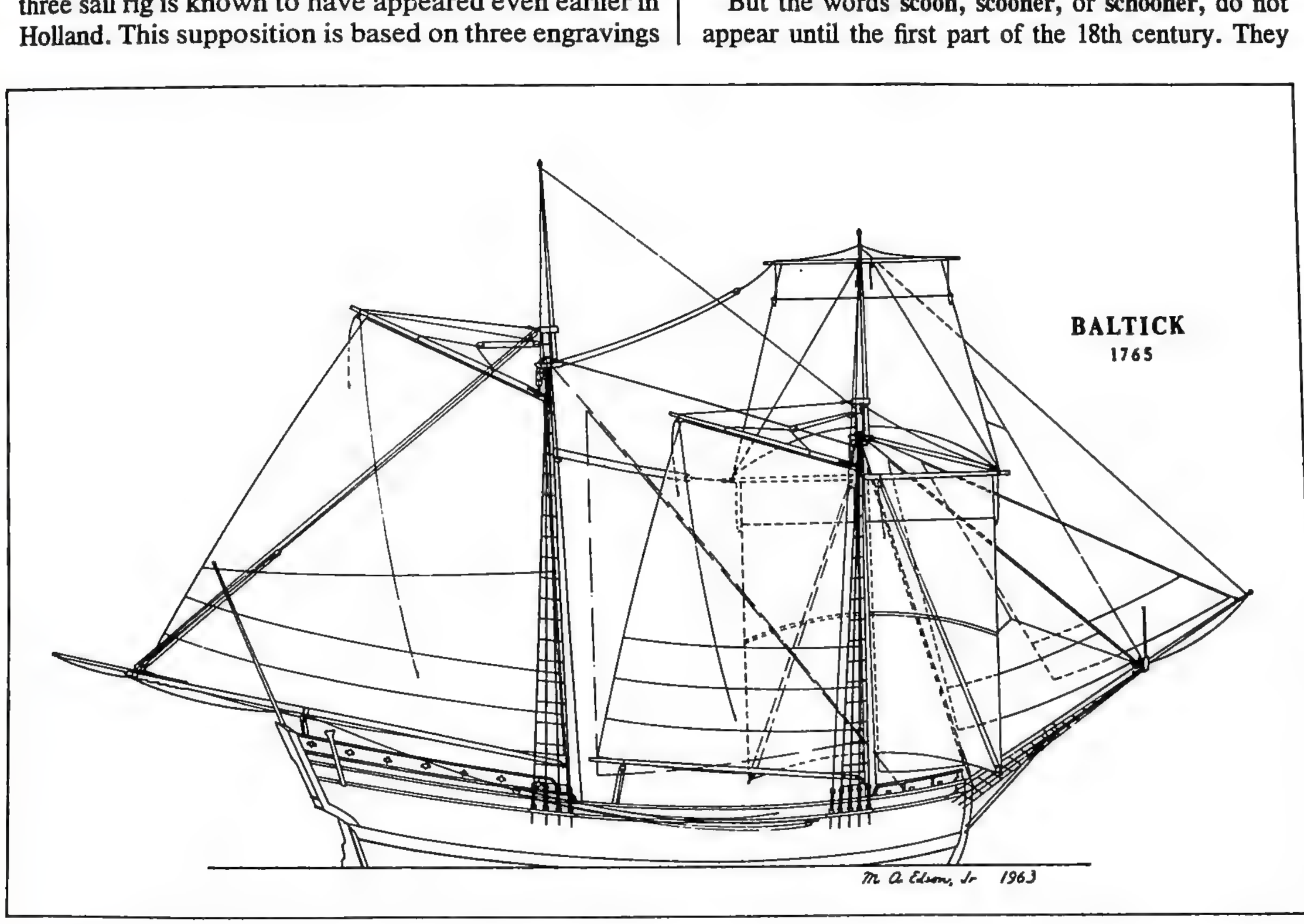


PLATE 2

The rigging plan above is based on a contemporary wash sketch inscribed "This shows the Schooner Baltick coming out of St. Eustatia y, 16th, of Nov, 1765." The original drawing (Neg. No. 700) is found in the Peabody Museum of Salem. Two additional wash drawings of *Baltic* also exist, one showing her in distress on "Nantucket Sholes" dated "y, 19th, of Dec," (Neg. No. 1361) and the other on the "Middle Ground" going into "Cape Fare," on "Feb, y, 16th, 1766," (Neg. No. 1362). Both of these last two drawings illustrate this vessel under reduced sailing rigs.

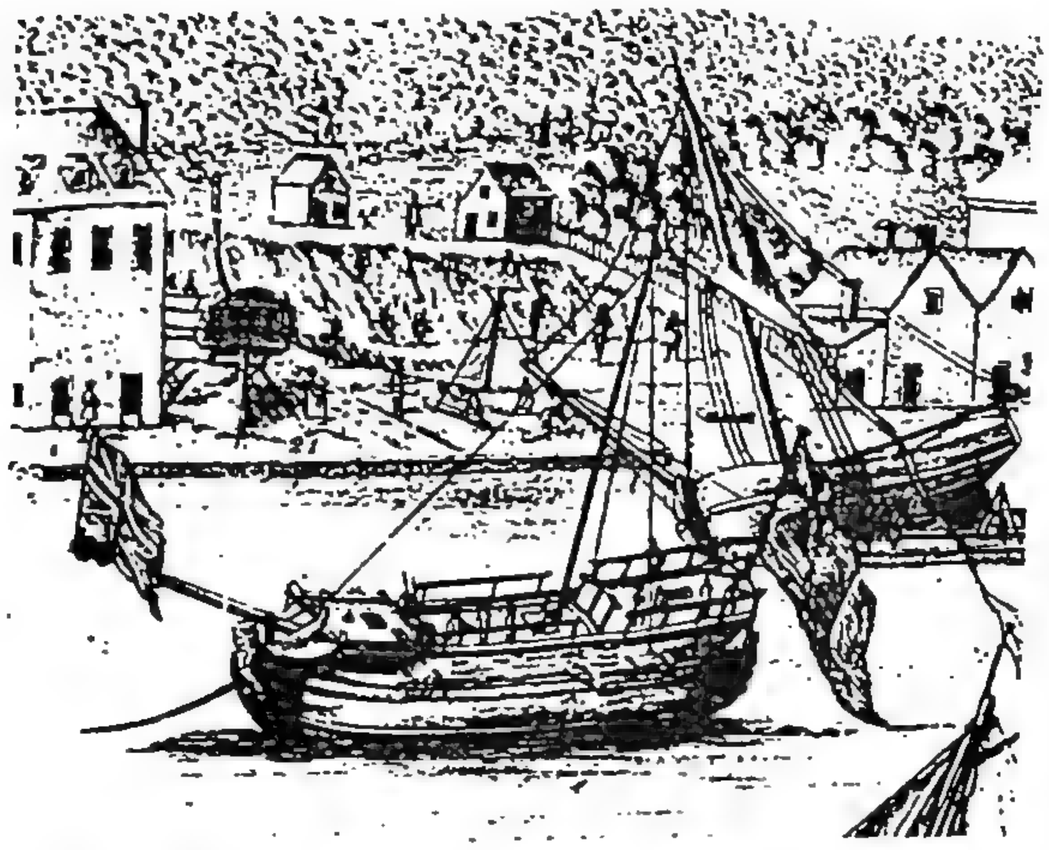


Figure 5. A detail from the William Burgis New York print dated 1717 showing a possible schooner being fitted out after launch.

appear initially in official papers prepared in Colonial America, and apparently are used to describe a specific rigged type of vessel, one that became very popular during the first quarter of the century in the American colonies.

In a book titled *Shipbuilding in Colonial America*, Joseph A. Goldenberg, Charlottesville, 1976, this statement is made: "As soon as the schooner was introduced into American waters, it began to threaten the sloop's position as most popular colonial vessel . . . .

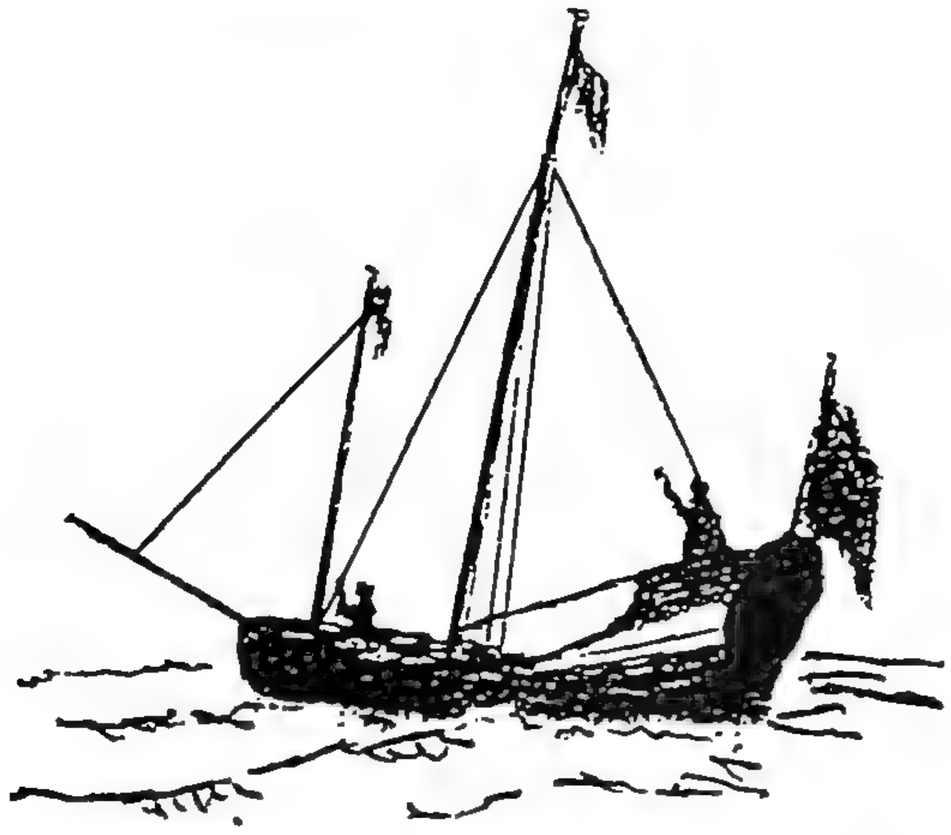


Figure 6. Sketch based on a line engraving by D. Van Bremden illustrating a possible shallop circa 1628.

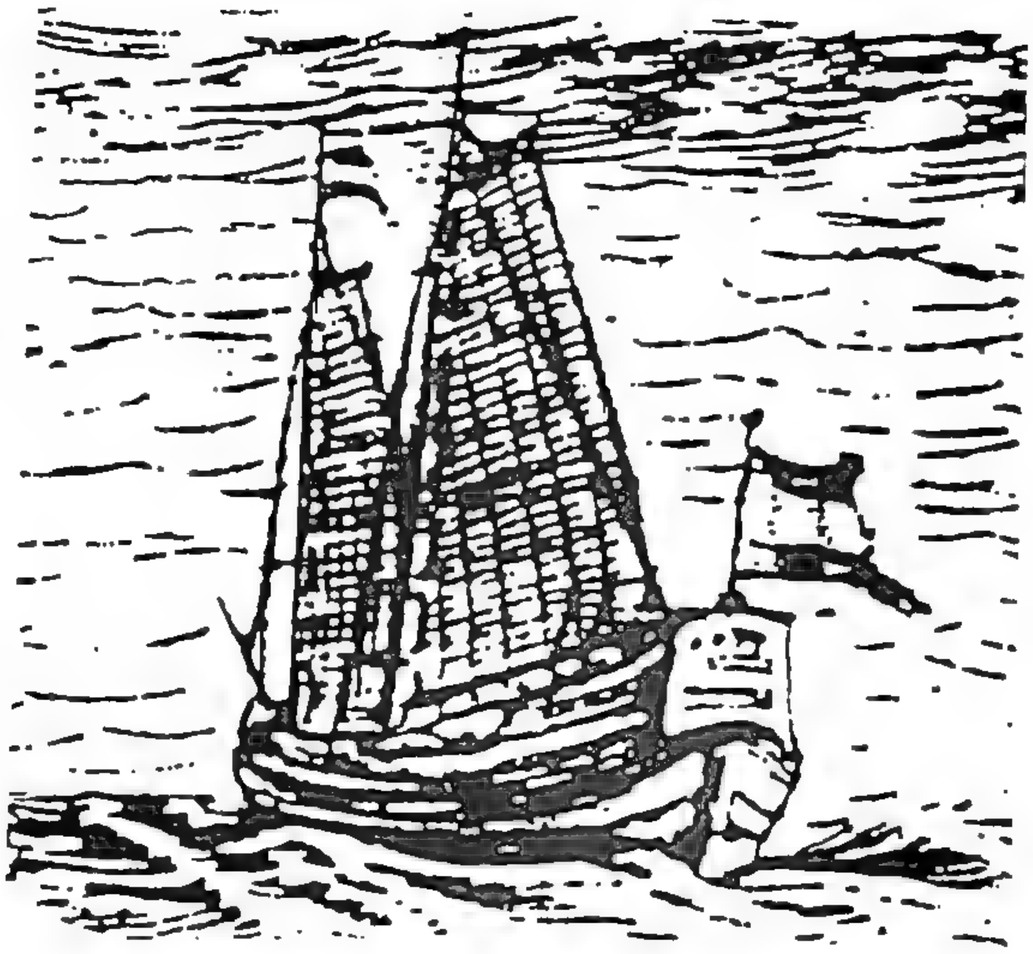


Figure 7. Tracing of a detail showing an early Dutch shallop like vessel from the world map by the sons of Willem Janzoon Blaeu, published in 1648.

[as] the schooner had two important advantages over the sloop—sailing ability and economy. . . ."

It has been pointed out by Howard I. Chapelle in *The Search For Speed Under Sail 1700-1855* that the earliest known plan of an American built schooner is

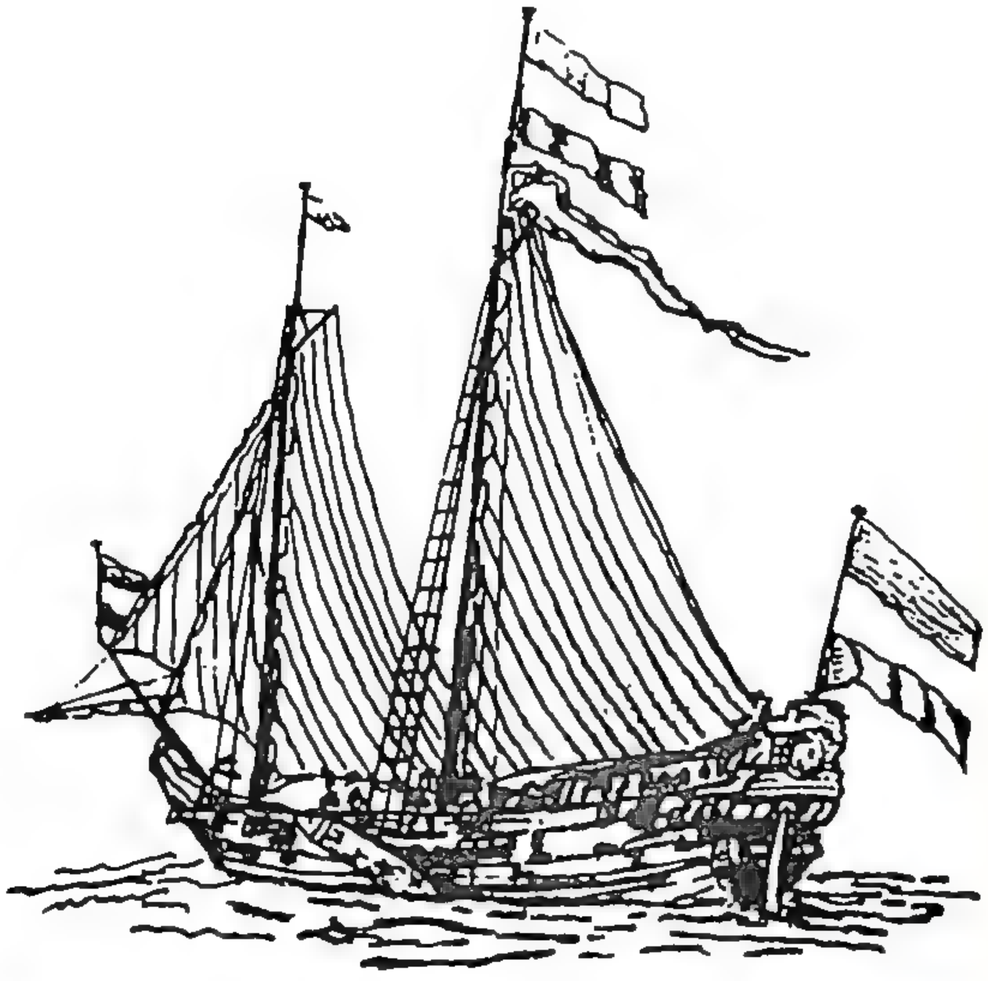


Figure 8. Tracing of a detail of an early Dutch shallop type vessel found on a map published in the "secret atlas" by van der Hem, prior to 1678.

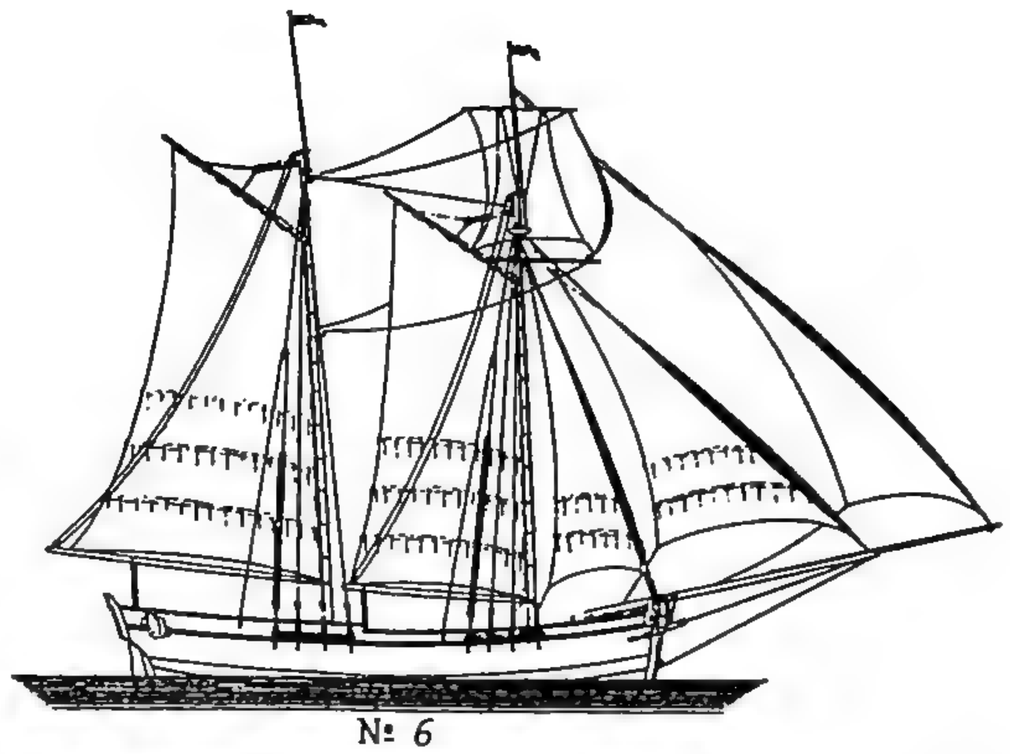
the *St. Ann* built about 1735. Plate 1 is a modern model of this vessel based on Mr. Chapelle's reconstruction that was constructed for Smithsonian exhibit. Please note that this vessel has square sails which worked together with fore-and-aft sails. Without the square sails, the vessel would not have been called a schooner but probably a shallop.

Though many individuals have attempted to place the development of the schooner during a period prior to the start of the 18th century, I feel that such suppositions are incorrect, and provides faulty data for those who attempt to make the claim that the schooner rig was developed even earlier. When the word **schooner** first appears it is applied to a rig, not to a hull, and seems to be one of the first nautical type words to be so used. The word would not have appeared unless the object it describes had not also appeared and was an operating fact. See the colonial drawings of schooner *Baltic* (1765).

Both the sloop and the shallop would have been instrumental in the development of the schooner, but the schooner appears to have been constructed as an advancement to a specific sailing vessel type for a specific use. The schooner rigged hull replaced the sloop/shallop rigged hull for it represented a more economical form of vessel, one that could be handled by a smaller group of individuals, but still provide a large cargo capacity, thus was both economical to build as well as economical to employ. The same sized sloop or shallop would have been more difficult to handle and not as handy for use in such trades as were current during colonial times, especially if handled by a small crew. The 18th century schooner rigged vessel could carry a large cargo through a variety of weather conditions, and would only require a relatively small crew to be properly handled.

Again, the earliest labeled European illustration of a schooner that I know of other than that which appeared in the first edition of the Falconer dictionary of 1768, is found on Plate LXII, Figure No. 6, published in *Architectura Navalis Mercatoria,* Fredrik Henrik af Chapman, Stockholm, 1768. This illustrates a small two masted vessel with gaff and boom main and fore sails, with three jibs, but only one fore mast topsail as a square sail. However, this does indicate that the schooner must still have at least one square yard rigged sail to be known by this name. This vessel is not merely fore-and-aft rigged, but does have a square sail set on one of its two masts.

Undoubtedly the strickly fore-and-aft rigged sailing



№ 6

Figure 9. The schooner rig as found in *Architectura Navalis Mercatoria,* Fredrik Henrik af Chapman, Stockholm, 1768.

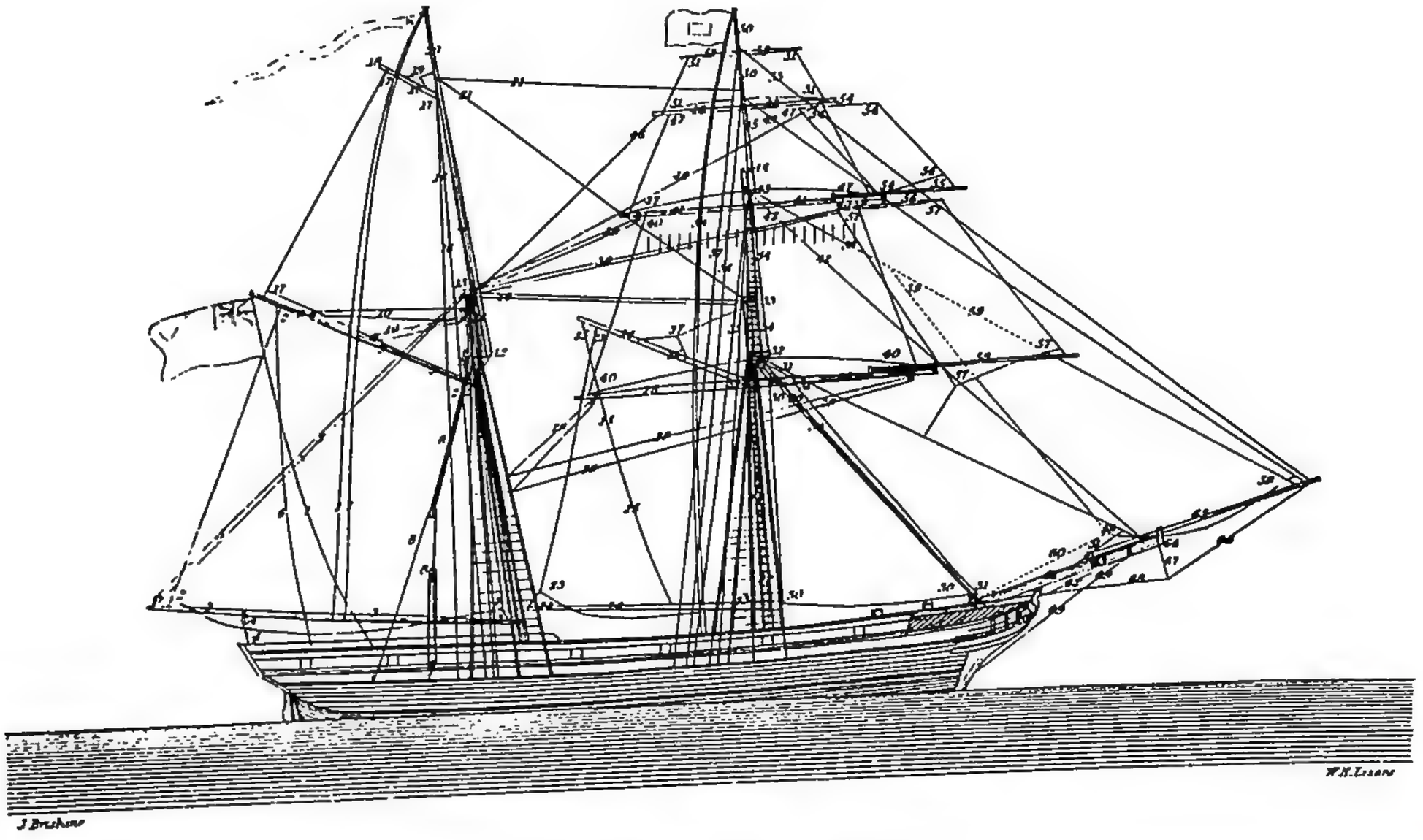
vessel of the 17th century contributed to the development of the schooner rig, but this earlier rig was known as a shallop rig, not a schooner rig. The cutter/sloop rigged vessel also was instrumental in the development of the schooner rig, as the latter adapted some of the features found on the single masted rigged hull of these two forms of vessels.

If one looks at later definitions of the word schooner, this becomes even more evident. For example, note what the definition of a schooner found in *Nautical Dictionary,* Arthur Young, Dundee, 1846, states: "SCHOONER. A small vessel with two masts, and no tops, the mainsail and foresail being each set on a gaff and boom. *A fore-and-aft schooner* has a cross-jack-yard, on which a square sail is set when occasion requires; all her other sails are fore-and-aft sails. *A top-sail schooner,* (which is the most common rig for schooners), carries a square fore-topsail, and frequently also a top-gallant sail and royal. There are some schooners with *three masts;* they likewise have no tops."

A later definition is found in *The Sailor's World-Book: an Alphabetical Digest of Nautical Terms,* Admiral W. H. Smyth, London, 1867. This states: "SCHOONER. Strictly, a small craft with two masts and no tops, but the name also applied to fore-and-aft vessels of various classes. There are two-topsail sail schooners both fore and aft, main-topsail schooners, with two square topsails; fore-topsail schooners with one square topsail. Ballahou schooners, whose

PLATE IV.

SCHOONER.



NUMERICAL INDEX TO SCHOONER.

1 Main Mast.
2 Main Sail.
3 Main Boom.
4 Main Sheet (and M. S. Block).
5 Main Boom Topping Lift.
6 Vangs of Main Gaff.
7 Signal Halyards.
8 Runner and Tackle.
9 Main Gaff.
10 Main Peak Halyards.
11 Main Throat Halyards.
12 Main Cross-trees.
13 Main Cap.
14 Main Stay.
15 *Main Topmast.*
16 Maintopmast Backstays.
17 Gaff Topsail.
18 Gaff Topsail Gaff.
19 Gaff Topsail Halyards.
20 Pole of Main Topmast.
21 Maintopmast Stay.
22 Fore Mast.
23 Fore Spencer.
24 Fore Spencer Boom.
25 Fore Spencer Vangs.
26 Fore Spencer Gaff.
27 Fore Peak Halyards (connected to Gaff by the *bridle*).
28 Fore Yard.
29 Fore Braces.
30 Fore Sail and Fore Stay.
31 Fore Staysail (and Halyards.)
32 Fore Cross-trees.
33 Fore Cap.
34 *Foretopmast.*
35 Foretopmast Backstays.
36 Foretopgallant Backstays.
37 Fore Royal Backstay.
38 Signal Halyards.
39 Foretopsail Braces.
40 Foretopsail.
41 Foretopsail Yard.
42 Foretopmast Stay.
43 Foretopmast Cross-trees.
44 Foretopmast Cap.
45 Foretopgallant Mast.
46 Foretopgallant Braces.
47 Foretopgallant Sail.
48 Foretopgallant Yard.
49 Foretopgallant Stay.
50 *Fore Royal Mast* and *Pole.*
51 Fore Royal.
52 Fore Royal Yard.
53 Fore Royal Stay.
54 Foretopgallant Studding Sail and Yard.
55 Foretopgallant Studding Sail Boom.
56 Foretopmast Studding Sail Yard.
57 Foretopmast Studding Sail.
58 Foretopmast Studding Sail Boom.
59 Jib, and Jib Stay.
60 Jib Sheet.
61 Bowsprit.
62 Bowsprit Shrouds.
63 Bowsprit Heart.
64 Bowsprit Cap.
65 Jib Boom.
66 Martingale Stay.
67 Martingale.
68 Martingale Back-ropes.
69 Bobstay.

Figure 10. Mast and sail plan of a schooner from *Nautical Dictionary,* Authur Young, Dundee, 1846.

foremast rakes forward; and we also have three-masted vessels called schooners."

A late 19th century marine dicrionary titled *A Dictionary of Sea Terms,* A. Ansted, London, L. U. Gill, 1896 (my edition was published by Brown in 1933, but represents a duplicate of this first edition), states: "**Schooner.**—there are two rigs of schooners common to our waters: the first mostly applied to traders, the second more particularly to yachts: both have two masts, fore and main.

"The merchant schooner, commonly called the *top-sail* schooner, carries a square top sail, sometimes *double (which see)* on the foremast, the main mast being fore-and-aft rigged.

"The schooner yacht is occasionally square rigged in so far as that she may carry a square fore-topsail; but more often she is fore-and-aft rigged on both masts. Schooner yachts were at one time extremely popular, and the first competitors for the America Cup were of this class; but of late years the cutter has entirely superseded them in racing.

"There is also another class of trading schooner, with three masts, each being fore-and-aft rigged. This is called the *three-masted schooner*. When it sets square sails on the foremast it is sometimes called *jackass* rigged. But the *jackass* rig must not be confounded with the barkentine, which, at a distance, it resembles; the barkentine having a *brig-foremast,* while the three-masted schooner has a schooner foremast.

"Besides these there is also a very beautiful class of schooner, having four masts, all fore-and-aft rigged. These vessels hail mostly from America. They are very swift and close-winded.

"*Schooner mast* or schooner *fore-mast*.—This is spoken of in contra-distinction to the *brig-mast*. The schooner foremast is composed of two parts only, the lower and the top mast. The brig, on the other hand, has lower, top, and top-gallant masts, and this constitutes the difference between the schooner and the brigantine, and between the three-masted schooner and the barkentine. A two-masted vessel with a brig-foremast is either a brig or a brigantine; with a schooner foremast, a schooner. In like manner a three-masted vessel (setting square sails on the foremast only) is a barkentine if she have a brig-foremast, and a three-masted schooner if she have a schooner foremast."

In 1901 another publication was printed titled *Patterson's Illustrated Nautical Encyclopedia,* Captain

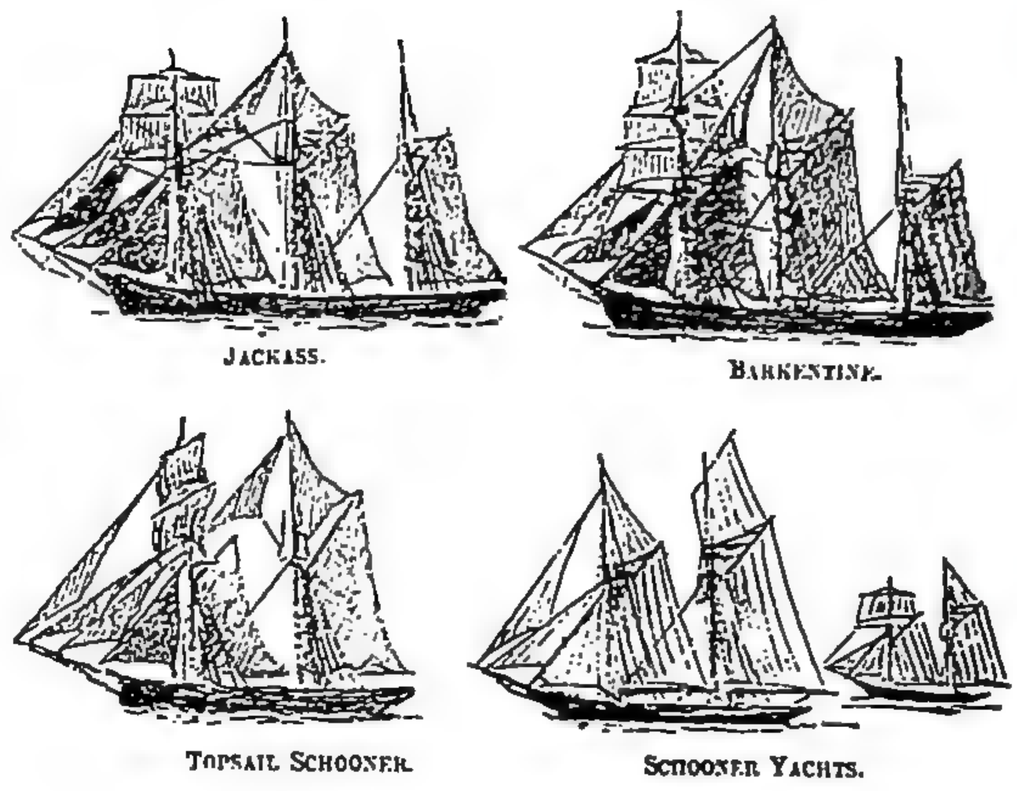


Figure 11. Four schooners and a barkentine found in *A Dictionary of Sea Terms,* A. Ansted, London, 1896.

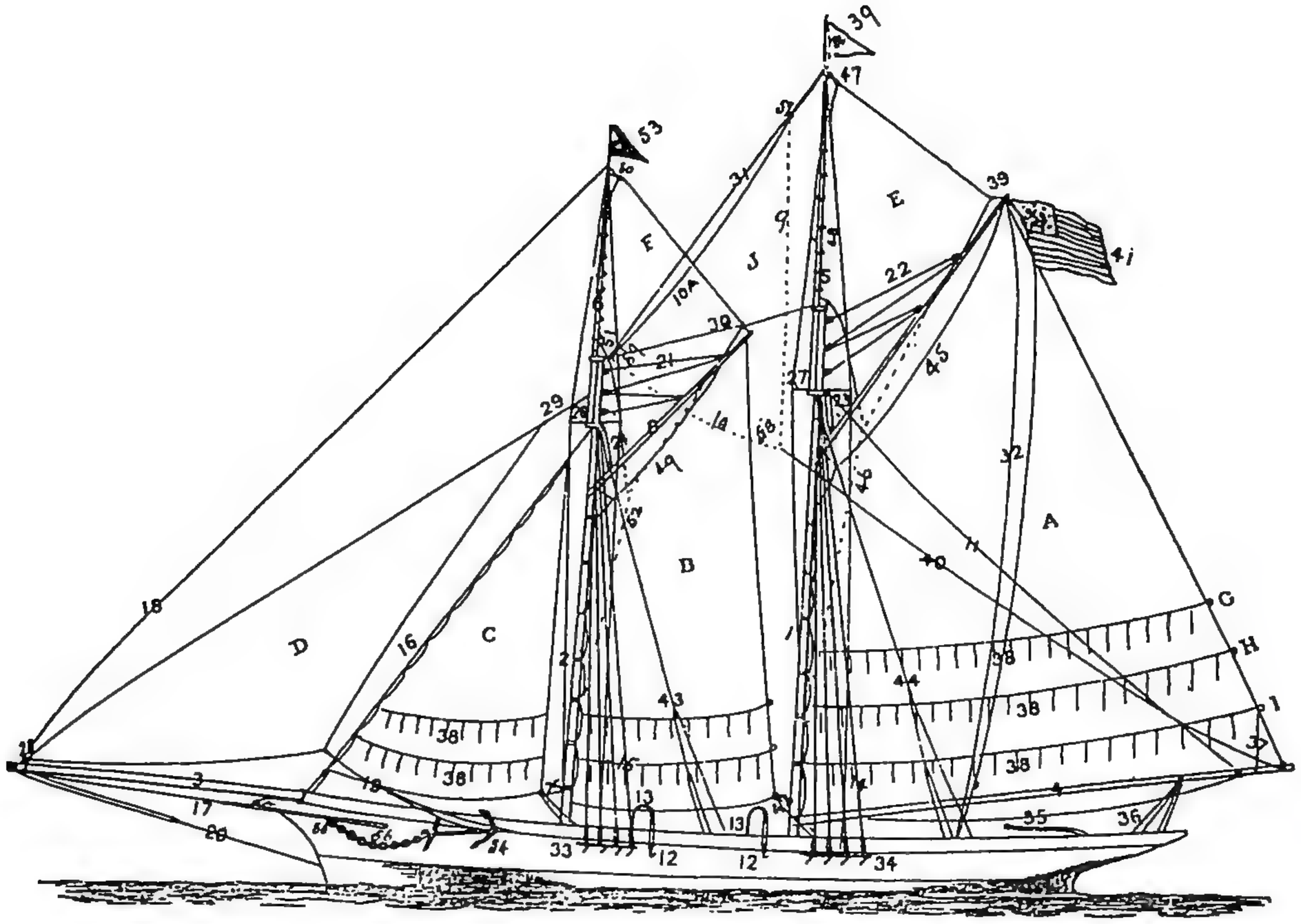
Howard Patterson, Cleveland, Ohio. The definition found here reads: "**Schooner.** A fore-and-aft schooner has no yards, all her sails being spread by booms and gaffs and by hoisting upon stays.

"A topsail schooner carries a fore-and-aft foresail and mainsail, a square foretopsail and topgallant sail and sometimes a royal.

"A main topsail schooner carries a square topsail on the main.

"Fore-and-aft schooners carry from two to five masts."

There are quite a number of additional definitions of the word schooner that are not mentioned above. However, the listing of these defintions provides some idea of the type of information normally found during stated periods for the understood definition of this word. Basically, though the purely fore-and-aft rigged schooner was recognized as a latter type of schooner, it was not so recognized during the first portion of the 18th century, but only so defined near the end of that century. Thus to assign the idea of a purely fore-and-aft form of rig as a method of rigging an early schooner would not be compatible with the known facts of its definition when it first appeared as a word. One should not assign the 20th century definition of this word to its first 18th century appearance, when a schooner was defined in various contemporary illustrations as "a two masted fore-and-aft rigged vessel with at leat one square sail added to either or both of its two masts."



NAMES OF SPARS, SAILS, RIGGING, ETC., OF A SCHOONER YACHT.

SPARS AND ROPES.

1. Mainmast.
2. Foremast.
3. Bowsprit.
4. Main Boom.
5. Maintopmast.
6. Foretopmast.
7. Main Gaff.
8. Fore Gaff.
9. Leach of Maintopmast Staysail.
10. Foot of Maintopmast Staysail
10A. Luff of Maintopmast Staysail.
11. Main Topping Lift.
12. Davit Falls.
13. Davits.
14. Main Shrouds.
15. Fore Shrouds.
16. Forestay.
17. Bowsprit Shrouds.
18. Foretopmast Stay.
19. Jib Sheet.
20. Bobstay.
21. Fore-Peak Halliards.
22. Main-Peak Halliards.
23. Main-Throat Halliards.
24. Fore-Throat Halliards.
25. Foresnaysail Sheet.
26. Fore Crosstrees.
27. Main Crosstrees.
28. Jib Traveler.
29. Jib Halliards.
30. Spring Stay.
31. Maintopmast Stay.
32. Ensign Halliards.
33. Fore Channels.
34. Main Channels.
35. Tiller.
36. Main Sheet.
37. Reef Pennant.
38. Reef Points.
39. Private Signal.
40. Maintopmast Staysail Sheet.
41. Ensign Hoisted on Main Gaff.
42. Fore Sheets.
43. Fore Masthead Runner and Tackle.
44. Main Masthead Runner and Tackle.
45. Main Gaff Topsail Sheet.
46. Main Gaff Topsail Tack Line.
47. Main Gaff Topsail Halliards.
48. Main Gaff Topsail Mast Hoops
49. Fore Gaff Topsail Sheet.
50. Fore Gaff Topsail Halliards.
51. Fore Gaff Topsail Mast Hoops
52. Fore Gaff Topsail Tack Line.
53. Club Signal.
54. Anchor (fished).
55. Hawse Hole.
56. Cable.
57. Maintopmast Staysail Halliards.
58. Maintopmast Staysail Clew.
59. Junction of Maintopmast Staysail Head and Foot (the Tack). Some Staysails have a square foot like the Mainsail.

SAILS, ETC.

A. Mainsail.
B. Foresail.
C. Forestaysail.
D. Jib.
E. Main Gaff Topsail.
F. Fore Gaff Topsail.
G. } Reef Cringles.
H. }
I. }
J. Maintopmast Staysail.

Figure 12. A schooner yacht from *Patterson's Illustrated Nautical Encyclopedia,* Captain Howard Patterson, Cleveland, Ohio, 1901.

Merritt A. Edson, Jr., was born in Pensacola, Florida. He served as an officer in the Marine Corps during World War II and the Korean conflict. He graduated from Georgetown School of Foreign Service with a B.S. degree. For several years he restored and constructed ship model exhibits for the Division of Transportation and prepared plans of sailing craft for the Division of Naval History, Smithsonian Institution. Mr. Edson is a former Secretary for the Nautical Research Guild, Inc., and for many years, Editor of its quarterly publication titled Nautical Research Journal. *He also was the principal Editor of the Guild's book on ship modeling techniques titled* Ship Modeler's Shop Notes. *Currently, though retired, he is engaged in a historical maritime publishing venture.*

What a Difference a Day Makes: The Royal Navy and the Yangtse Incident of 20-21 April 1949

MALCOLM H. MURFETT
National University of Singapore.[1]

It had become established practice by April 1949 for Attlee's government in London to retain a warship at Nanking in order to protect British nationals in that former capital city from the ravages of the Chinese civil war.[2] This controversial policy, departing as it did from the Moscow Declaration on non-intervention of December 1945, involved requesting rights of passage on the River Yangtse from the nationalist authorities so that the Nanking guardship could be relieved after completing her tour of duty and be replaced by a Royal Navy frigate or destroyer from the China station at Shanghai. It was to be a policy which would unwittingly damage still further the already sensitive relations Britain had with the Chinese communists, compromise its alleged impartiality in the war and sadly lead to a series of bloody encounters between ships of the Royal Navy and units of the Peoples Liberation Army on the Yangtse in which roughly three hundred lives would be lost.

Whatever the rationale had been for the resumption by the British of their former extra-territorial rights in China, the fact was that by the spring of 1949 they had become more of an embarrassing hindrance than an actual asset for them. By this time the communists were drawn up in great numbers along the northern bank of the Yangtse and were threatening to cross the river and embark upon the final conquest of the rest of southern China if the nationalists did not agree to accept Mao Tse Tung's 8 point programme for peace.[3] After apparently cancelling the first deadline for acceptance of their ultimatum to the Kuomintang, communist officials told the nationalist prime minister that it had been merely postponed until 20 April. If the KMT failed to give its unqualified support for Mao's terms by Wednesday midnight (20th), the PLA would immediately resume the war.[4]

Unaware of this latest twist in the political crisis, Vice Admiral Madden, the flag officer, second in command of the Far East station, decided on 16 April to go ahead with the delayed relief of H.M.S. CONSORT, the British 1710 ton destroyer, which had been in port at Nanking since 22 March. Although she had sufficient supplies of food and fuel on board to remain at anchor up river for 36 days if need be, CONSORT had been originally expected to leave Nanking for Shanghai on 12 April, the deadline of the first communist ultimatum to the KMT.[5] Neither Madden nor Sir Ralph Stevenson, the British ambassador in China, had wished to be provocative or run any risk of getting CONSORT or H.M.A.S. SHOALHAVEN, her intended replacement, embroiled in a possible resumption of the civil war if they could help it. As a result, the original orders for the changeover had been postponed for a few days in the hope that a clearer picture would soon emerge about what was likely to happen both politically and militarily throughout China and especially in the Yangtse region. Knowing that SHOALHAVEN was required for operational duty with COMNAVFE forces in Japanese waters at the end of the month, Madden came to the conclusion that it made more sense to substitute the sloop-cum-frigate

1. The author acknowledges with gratitude the generous financial support provided by the National University of Singapore for the research in connection with this article.

2. For the extraordinary background to this policy see M.H. Murfett, "British Naval Policy on the Yangtse in 1949: A Case of Diplomacy on the Rocks," *War & Society*, vol. 6, no. 1 (May 1988), 79-92.

3. *Ibid.*

4. Stuart to Secretary of State, 782, 18 April 1949, *Foreign Relations of the United States*, 1949, VIII (Washington, 1978), 244-6.

5. Flag Officer, Second in Command, Far East Station, (Singapore) (hereafter FO 2 i/c FES), to Admiralty (hereafter Adm.), 021549Z, 3 May 1949, F6398/1219/10G, FO 371/75891.

H.M.S. AMETHYST for her as the Nanking guardship.[6] Lieutenant Commander Skinner, the captain of the AMETHYST, was given his final sailing orders on Monday 18 April and told to leave Shanghai on his passage up river the next morning even though the flag officer had not yet received permission from the nationalist authorities for such a journey to be made.[7]

At this time of the year the Yangtse is undoubtedly one of the most difficult and formidable rivers in the world on which to navigate. Apart from its hazardous shoals, which must be negotiated with the greatest care, the navigable channel tends to be a narrow, constantly shifting menace; a trap to the inexperienced helmsman or those who fail to exercise the utmost caution. Over the years the Yangtse had become established as one of the few places in the world where British captains were allowed to employ experienced local pilots to take their vessels up or down river. In the case of the AMETHYST, two pilots were to be taken on board once the vessel reached the area off the Woosung Forts shortly after moving off from Shanghai.[8]

According to G. L. Weston, the first lieutenant of the AMETHYST, the ship's crew had few apprehensions about making their way up the Yangtse, even though it meant doing so less than 48 hours before the expiry of the communists' second ultimatum to the KMT. Nonetheless, they prepared themselves for possible trouble en-route as his later report makes clear.

> Large painted union flags had been made and placed ready for display; ammunition had been got up; and it was decided to close up at action stations before proceeding through areas where the Naval Attaché, Nanking, had signalled the communists were concentrated and where crossings might take place.[9]

It was wise of them to be ready for anything since THE TIMES correspondent had begun relaying despatches on 18 April to the effect that fighting was going on between troops of the PLA and KMT in the Yangtse area.[10]

Leaving Holt's Wharf at 8:00 a.m. on Tuesday 19 April, AMETHYST, flying the white ensign as well as the union jack and with a further union jack painted on her hull, picked up her two Chinese pilots as arranged and made steady progress up river against a strong tide.[11] It took her some eight and a half hours to reach the town of Kiangyin where the frailty of the nationalist position in the civil war was made apparent for all to see. An important naval redoubt, Kiangyin stood as a painful and constant reminder of just how precarious the KMT's hold was on the Yangtse region. While it remained in nationalist hands for the time being, the town and especially the harbour area was already covered by a PLA battery position dug in on the northern bank of the river a short distance away. Upon arrival Lieutenant Commander Skinner had observed standard orders and requested permission to drop anchor for the night from the senior Chinese naval officer on board the nationalist ship the YAT SEN. Once he had received the necessary consent to do so, Skinner brought his ship to and anchored it not far from where a number of KMT warships lay.[12] Movement on the river during the hours of darkness was forbidden by the nationalists, but even if it had not been, AMETHYST would hardly have risked making the rest of her journey up to Nanking at night.[13] Although his original intention had been to keep the AMETHYST lit up while she lay at anchor, on the grounds that she could then be plainly distinguished as a vessel belonging to a neutral power, he had immediately complied with a request from the officer on board the YAT SEN to darken his ship.[14]

Skinner, mindful from reports he had been receiving that further north the communists had already begun shelling some of the nationalist positions, addressed his crew and warned them that in the morning they would be entering a fighting zone. He ordered his men to have the union jacks which had been painted on canvas positioned either side amidships, but they were not unfurled at this stage.[15]

At 5.10 a.m. on Wednesday 20 April, AMETHYST weighed anchor and flying an additional white ensign

6. *Ibid.*

7. Enclosure to G. L. Weston's letter, 8 Oct. 1949 submitted as Appendix III to HMS AMETHYST's Report on the Yangtse Incident, 1949, (hereafter Weston,), p. 248, Adm 116/5740A.

8. HMS AMETHYST's Final Report on Yangtse Incident, (hereafter AMETHYST Report), 22 May 1950, M0118/50, p. 21, Adm 1/21851/50.

9. Weston, p. 248, Adm 116/5740A.

10. *The Times*, 19 April 1949; these reports were amplified somewhat in the *South China Morning Post*, 19 & 20 April 1949.

11. *The Times*, 21 April 1949.

12. AMETHYST Report, p. 21.

13. Lawrence Earl, *Yangtse Incident* (London, 1973) (hereafter Earl), p. 11.

14. Weston, p. 248; Interview with Sir Peter Berger, Cambridge, 2 June 1988.

15. AMETHYST Report, p. 21.

proceeded up river towards Nanking. Unfortunately, the advantage of an early start was all but cancelled out when a large bank of fog enveloped the ship and reduced visibility to such an extent that the local Chinese pilot advised the captain to drop anchor and wait for the fog to lift. They hove to at 6.38 a.m. It took about an hour for visibility on the river to improve sufficiently for the ship to continue on her journey. As AMETHYST would soon be reaching one of the areas where the communists were gathered in some strength, the order for the first degree of readiness for action was piped down from the bridge at 8.00 a.m.[16]

If she was called upon to defend herself, AMETHYST had an armoury complement of six 4″ calibre dual purpose guns, four of which were mounted forward of the bridge in two pairs to form 'A'gun and 'B'gun, while the third pair, known as 'X'gun, were mounted aft to sweep both to port and starboard and overhead if need be. In addition, there were two twin 40mm light anti-aircraft guns and two small quick firing heavy machine guns.[17] Shortly after closing up for action stations, the gun crews both fore and aft were asked to test their firing circuits. This was a quite straightforward task which would under normal circumstances create little or no noise. Strangely enough, however, when the official report was circulated later in the year mention was made of the possibility that the noise of this testing procedure might just conceivably have been heard by the communist forces on the northern bank of the river.[18]

At the same time as the gun crews prepared for all possible contingencies, those in the engine room were advised that at 8.30 a.m., when the AMETHYST would be passing a communist battery position, the ship's oil fuelled turbines would have to forsake economy for a substantial increase in revolutions and an injection of speed that would take her from 11 to 16 knots, but still someway short of the 19.25 knot capacity of this vessel.[19]

Shortly after the AMETHYST had moved into what was thought to be a possible danger zone to the north of Low Island, some 30 miles up river from Kiangyin, a battery on the northern bank of the river opened fire on her without warning. According to the official report of the incident, at 8.36 a.m. small arms fire and later medium range artillery was directed towards the ship from the starboard side. Although difficult to locate exactly from the bridge of the AMETHYST, it appeared that the guns were cited in the vicinity of Hsi-hsin-wei on the island of Yung-an-chow. Ten shells missed their target: some fell short while the others passed harmlessly overhead.[20] Even so, the situation was not without an element of danger and the captain responded quickly to it by calling for full speed ahead and by ordering the guns to be trained onto the target and to open fire once the armaments director could plainly distinguish it.[21] At the same time 'X'gun's crew were asked to unfurl the union jacks down the sides of the ship where they were bound to be seen by those forces attacking it from the northern bank.[22] Before AMETHYST's guns could engage the target, the firing ceased. It had lasted 14 minutes. Lieutenant Commander Skinner drafted a signal for coding and despatch to the flag officer at the Far East station recording the incident, but before the message could be sent other matters intervened to prevent it from ever getting through.[23]

AMETHYST continued up river at speed passing other communist batteries lined up on the northern bank as she did so. None opened fire on her. She had proceeded about 9 miles from the scene of the first incident and was passing to the east of Rose Island, at a point some 60 miles north east of Nanking, when she

16. *Ibid.*

17. C. E. Lucas Phillips, *Escape of the 'Amethyst'* (London, 1958), p. 23.

18. AMETHYST Report, p. 21; Interview with Sir Peter Berger, Cambridge, 2 June 1988.

19. Earl, p. 13; see also J. A. Jerome (Dept. of C.N.I. Admiralty) to W. A. Fletcher, CNI 269/49, 7 Sept. 1949, Adm 116/5704.

20. AMETHYST Report, p. 21; Weston, p. 248; Enclosure 'A' of Adm. to R. F. Wood, 3 May 1949, Attlee dep. 82, folios 56-63, Bodleian Library, Oxford (hereafter B. L.).

21. *Ibid;* Earl, pp. 14-15.

22. All times with the suffix Z are in Greenwich Mean Time. In the period up to 30 April 1949 the time differential was 8 hours. After 1 May 1949 for the duration of the summer it would be 9 hours.
AMETHYST to FO 2 i/c FES, 200111Z, 20 Apr. 1949; 290507, 29 Apr. 1949, AMETHYST Signal Log (hereafter A.S.L.), April 1949, Kerans 69/45/1, Imperial War Museum, London (hereafter I.W.M.).

23. The original message read:

HAVE BEEN FIRED ON FROM NORTH BANK AT BEAVER ISLAND, LAT. 32 DEGREES 13 MINUTES NORTH, LONG. 119 DEGREES 53 MINUTES EAST BY MEDIUM ARTILLERY, TEN SINGLE GUN SALVOES AND SOME SMALL ARMS. SHIP WAS FLYING MASTHEAD ENSIGN. UNION JACKS WERE SHEWN BOTH SIDES AFTER FIRST SALVO. NO HITS. FIRE WAS NOT RETURNED AS NO DEFINITE TARGET COULD BE IDENTIFIED DUE TO MIST.

AMETHYST to N.A. Nanking, 200111Z, 20 Apr. 1949, Adm 116/5740.

came under sustained heavy artillery fire from a communist battery situated at the mouth of a tributary leading to the Kao-yu Lakes at San-chiang-ying. It was exactly 9.30 a.m.[24]

From the time that a 75mm armour piercing shell struck the ship four feet above the flag deck and bored a round one and a half inch by three inch diameter hole in the wheelhouse, the fate of the AMETHYST was probably sealed. In this devastating burst of gunfire, the wheelhouse was suddenly reduced to a shambles; one rating was hit in the stomach and mortally injured and the coxswain, Chief Petty Officer Rosslyn Nicholls, was hit by flying shrapnel and badly wounded in both the head and right leg. As he fell over to his left, he pulled the wheel involuntarily to port with him as he slid to the floor. At the same time the shell had managed to jam the starboard engine room telegraph, a crucial factor in contributing to the eventual grounding of the ship.[25]

Almost immediately thereafter another 75mm shell entered the AMETHYST at an angle of 30 degrees four feet above the bridge deck on the starboard side. It punched a two inch diameter hole into the bridge, travelled fifteen feet and exploded on impact in the forward corner on the port side with appalling force, wreaking havoc with virtually everyone gathered on the bridge at this time. Before any respite could be gained, however, another shell smashed into the bridge further aggravating the chaotic situation.[26]

Lieutenant Weston had been on 'B' gundeck when the first shell that had been fired passed harmlessly over the ship. As he scrambled to get to the bridge, he had to pick his way through the shattered wheelhouse, a victim to a direct hit from the second shell that had been fired in the attack. By the time Weston had reached the bridge, the captain had ordered full speed ahead. As the ship's gunnery officer, Weston was told by Skinner to open fire on those attacking the AMETHYST. Before he could get the order put into effect, the bridge received its first direct hit. His description of what happened next makes sobering reading:

> Everyone there was killed or wounded, except the Yeoman of signals. I received a wound in the chest, a piece of shrapnel passing through my lung. My communication number died within a few minutes; the Captain and Chinese pilot were seriously wounded (mortally as it proved). I tried to con the ship into the middle of the river, but the first hit had jammed the steering hard to port, and the ship's head swung towards the South bank.[27]

Once it became obvious that Skinner was in no state to issue any further orders, Weston promptly assumed command.[28] Despite ordering full astern both, he found AMETHYST unresponsive. Although the port telegraph worked normally, stopping the port engine as directed, the starboard telegraph had been jammed from the moment the shell had struck the wheelhouse, so the starboard engine remained at full ahead. Once Weston realised that something was dreadfully amiss, he unsuccessfully attempted to establish voice-pipe contact with the engine room. In the end and without receiving any orders to do so, Leonard Williams, the engine room artificer, decided on his own initiative to stop both engines.[29] By this time, however, AMETHYST, with her low power room wrecked and gyro useless, her electrical, gunnery, lighting and navigational circuits damaged, unable to steer or defend herself adequately, had ground to a halt on a mud bank about 150 yards from the western shore of Rose Island. All attempts to use her engines to get her bows out of the mud failed. She was trapped. It had taken only five minutes to cripple the AMETHYST. It was now 9.35 a.m.[30]

After giving orders for stretcher parties to remove the casualties from the bridge to a more sheltered part of the ship on the port side well forward, Weston left the bridge and made his way to the wireless room where he drafted an urgent signal reporting what had occurred and the fact that he had assumed command of the AMETHYST.[31] He did not know at this point that the main transmitters had been put out of action and that an emergency transmitter would have to be rigged up to send a shortened version of this message. Even so, a flash signal to all ships was despatched at 9.46 a.m. which said simply:

24. AMETHYST Report, p. 21.

25. Action Damage Report: HMS AMETHYST (hereafter A.D.R. AMETHYST), undated, Adm 116/5740A; E. G. Wilkinson, "H.M.S. 'AMETHYST' In The Yangtze—Engineering Exploits" (hereafter Engineering Exploits), pp. 417-425, AMETHYST Scrapbook, II, Kerans 69/45/1, I.W.M.; Earl, pp. 16-17, 19.

26. A.D.R. AMETHYST, undated, Adm 116/5740A; Earl, p. 17.

27. Weston, p. 248.

28. Earl, pp. 18-19; AMETHYST Report, pp. 21-22.

29. Earl, p. 21.

30. A.D.R. AMETHYST, Adm 116/5740A; AMETHYST Report, p. 22; C. E. L. Phillips, *op. cit.*, p. 45.

31 Weston, p. 249.

Under heavy fire am aground in approx. position about 31 degrees 10 North 119 degrees 60 mins. East. Large number of casualties.[32]

Stuck fast in the mud, the AMETHYST was in an intensely vulnerable position. To begin with she was virtually defenceless since she had gone aground in such a way that neither the 'A' nor 'B' guns could be brought to bear on the target and these were therefore abandoned as useless. Although peppered by shells from the battery on the northern shore and sustaining a number of serious casualties among its crew, 'X' gun remained operational for a few minutes and had fired about thirty rounds in reply before the right gun received a direct hit and ceased firing. Two men were killed in this explosion and another three were wounded by flying shrapnel.[33] Undeterred, Leading Seaman Mullins, the captain of the 'X' gun mounting, fired a few more rounds with the left gun until ordered by Weston to stop and withdraw in the hope that this action would avoid provoking the shore batteries any more than necessary and prevent further loss of life.[34]

For all Weston's good intentions, the plan failed to bring the persistent shelling of the AMETHYST to a halt. Instead the communist batteries continued to rake the ship with both medium and heavy artillery fire at will, complicating an already bad situation for those on board the stricken vessel. In these circumstances, with the communist offensive still at its height, Weston had to contemplate the possibility of having to defend the AMETHYST with what was left of the ship's company against any assault force that the PLA might decide to send to subdue her. He made hurried arrangements for distributing bren guns, rifles and small arms to the crew, and told them to take up their positions along the upper deck to repel boarders should they attempt to come alongside.[35]

Meanwhile stretcher parties were taking the dead and wounded from the places where they lay to the after mess-deck and quarter-deck, where it was hoped they would have more shelter. Berger, the navigation officer, had recovered consciousness by this time and was roaming the ship, as best he could, ensuring that the acting-captain's orders were obeyed to the letter. Amidst all this frenetic activity, the shelling continued unabated and the casualty toll mounted aboard the frigate. There seemed no end to it in sight, for the communists appeared intent on destroying the ship whatever the cost in human lives.[36]

As the situation deteriorated, so the injured requiring attention from Alderton, the ship's doctor, and Baker, the sick-berth attendant, grew in number. There was little they could do on board ship for the mortally wounded or those who had been seriously hurt and Weston must have been aware of this from the outset. It was clear that the medical resources of the AMETHYST were quite incapable of dealing with the scale and nature of this type of crisis. It was imperative, therefore, for some plan to be devised which would enable the wounded to be ferried safely ashore so that they might receive hospital treatment while it was still possible to help them. Before anything of this kind could be arranged, however, an inspection of the boats revealed that only one, the starboard whaler, remained undamaged and in a seaworthy condition. This was lowered and the Carley floats were towed round to the port side of the quarter-deck so as to disembark the wounded.[37]

After giving Weston an injection of morphia to deaden the pain he was feeling from his shrapnel wound, Alderton and Baker were making their way to the quarter-deck to attend to some of the injured men gathered there when a shell exploded near them killing them both instantly.[38] This calamity underlined the gravity of the situation. It was now even more essential for the most seriously injured to be evacuated as there was no experienced medical team aboard the AMETHYST who could administer to their needs.

Soon afterwards, sometime between 10.00 and 10.30 a.m., as the shelling wore on, Weston decided reluctantly that the only effective way of ensuring the safety of the ship's company was for the majority of them to abandon the AMETHYST and try to get to the

32. AMETHYST to All Ships, T.O.O./20 April, F5544/1219/10, FO 371/75887.

33. AMETHYST Report, p. 22.

34. Weston, p. 249.

35. AMETHYST Report, p. 22; Interview with Sir Peter Berger, Cambridge, 2 June 1988.

36. AMETHYST Report, p. 22; Earl, p. 26.

"Rate of Fire was about once every Half Minute but allowing for pauses average fire was about one every one and a half minutes. Firing was most accurate and nearly all rounds hit. Machine gun fire kept decks and nearby water clear during late forenoon and afternoon."

AMETHYST to FO i/c FES, 210627Z, 21 Apr. 1949, A.S.L. April 1949, Kerans, 69/45/1, I.W.M.

37. AMETHYST Report, pp. 22-3; Weston, p. 249.

38. *Ibid*.

south shore of Rose Island. Although it was hoped that they would be able to rejoin the ship later, much would obviously depend on what the communists decided to do about the AMETHYST. Since the first lieutenant had no way of knowing what their intentions were, he sought to keep a steaming party on board in addition to a group of about a dozen volunteers who would remain to look after some of the stretcher cases until they had been finally evacuated from the ship.[39]

Berger was deputed to execute this order and he tackled it promptly with a will, encouraging those of the crew who could swim to go over the side and strike out for the shore and urging those who could not to man the whaler.[40] According to the official report of the incident, between 65-70 ratings left the ship, most of them in the boat or on the floats, but many others never received the order to abandon ship or, if they did so, chose to ignore it. In all 95 men, 70 of whom were uninjured, appear to have remained on board the AMYTHYST after the evacuation call.[41] Alas, the one local pilot who had escaped injury was not among them.

AMETHYST's flash signal reporting the fact that she was under fire and aground somewhere beyond Kiangyin was monitored by the British embassy in Nanking and picked up by the cruiser H.M.S. LONDON en route from Hong Kong to Shanghai with Vice Admiral Madden on board.[42] One can imagine the look of astonishment on the faces of those receiving this startling and thoroughly unwelcome piece of news, not the least because in stating AMETHYST's position her radio operator, without the benefit of a navigational chart, had contrived to place the vessel's latitude and longitude at a point some distance from either the Yangtse or any other river![43] Although this introduced an inappropriate touch of the bizarre to the proceedings, the stark disclosure that the AMETHYST had been fired upon and had suffered a large number of casualties in the process quickly dispelled any wry amusement on this score. Such was the tenor of the news that it forced Sir Ralph Stevenson and Vice Admiral Madden to recognize the likelihood from the outset that whatever had taken place on the Yangtse would almost certainly have an international rather than local significance. They were not mistaken.

Despite having been informed about the AMETHYST soon after she had gone around, neither the admiralty nor the foreign office in London tried to take over the handling of the crisis from their men on the spot. This meant that despite the gravity of the situation and the deep concern felt in British government circles, the ambassador and the flag officer were virtually given a free hand to do what they could to devise a sensible and coherent policy for bringing this unfortunate incident to a timely end with the minimum loss of life. Nonetheless some of the questions raised by the authorities in London contained implicit criticism of the decision made by the flag officer and the British ambassador to send AMETHYST up river to relieve CONSORT.[44] In a wire sent in reply to Stevenson's cable reporting the attack on the frigate, the foreign office sent the following message:

> Naval Attache's signal 190417z/April to Flag Officer Second-in-Command Far East Station referred to a possible Communist crossing of the Yangtse on the 21st April and named the vicinity of Ku An as one of the two most likely crossing places below Nanking.
>
> I am not clear why Amethyst had to pass through danger zone so close to the possible zero hour and shall be grateful for immediate information as to precise circumstances in which Amethyst was proceeding to Nanking at this juncture.[45]

Although thrust on the defensive by this pointed query, Stevenson did his best to rehearse all the advantages of maintaining a guard ship at Nanking; a policy decision with which the British government had not been opposed in the past. Aware of this fact, he indicated that in the opinion of the men on the spot the likelihood was that peace would prevail while the change-over was being made and that the two British vessels would have been outside the danger area before the expiry of the ultimatum.[46]

At a chiefs of staff committee meeting held in London later that morning (20 April), Fraser, the first sea

39. *Ibid.*

40. Interview with Sir Peter Berger, Cambridge, 2 June 1988.

41. AMETHYST Report, pp. 23-24; p. 271.

42. Stevenson to F.O., 491, 20 Apr. 1949, F5476/1219/10, FO 371/75887.

43. Earl, p. 24.

44. Although a number of these despatches have a restricted access, those that have been released by the foreign office are to be found under file numbers 5476, 5483, 5550, 5551, 5596, 5598, 5599/1219/10, FO 371/75887.

45. F.O. to Stevenson, 394, 20 Apr. 1949, F5476/1219/10, FO 371/75887.

46. Stevenson to F.O., 454, 21 Apr. 1949, F5550/1219/10, FO 371/75887.

lord, could do little more than merely inform the other service chiefs of the bare details of what was known about the attack on the AMETHYST. In his report he reaffirmed admiralty policy for the immediate future, which was to allow Madden to take what action he felt was necessary under the circumstances, but mentioned its intention of suspending all future passages by H. M. ships up the Yangtse.[47] This looked like and indeed was a case of too little, too late and must have stirred in some of those present memories of the familiar metaphor about shutting the stable door after the horse had bolted!

Later that same day the China and South East Asia Committee met under the chairmanship of Clement Attlee, the prime minister. It was a small body charged with reviewing strategic policy, but contained some of the most influential members of the government. Those present on this occasion were Ernest Bevin, the foreign secretary, Sir Stafford Cripps, the chancellor of the exchequer, A. V. Alexander, the minister of defence, Hugh Dalton, the chancellor of the duchy of Lancaster, and George Isaacs, the minister of labour and national service. During the course of the discussion following Alexander's opening remarks on the details of the incident, some doubts were expressed about the desirability of using a warship for the carriage of peaceful stores to the British embassy. According to the official report of the proceedings, couched in notoriously bland language and providing only a brief summary of the committee's conclusions, the ministers were careful not to make their criticism very explicit; the minutes of the meeting do not mention any individuals by name and were confined for the most part to showing sympathy mixed with mild reproof for those whose decision it had been to allow the AMETHYST to sail up river at this time without first having obtained a safe conduct pass from both sides in the civil war.[48]

Bereft of much information about the latest situation in China, the British government faced an inevitable delay of several hours on that first day of the crisis before it would be in a position to verify the alarming news which AMETHYST had conveyed so unexpectedly that Wednesday morning. Apart from any other considerations, nothing was known about the other parties involved in the incident, the exact casualty toll or even the extent of the damage caused to the ship. Therefore, unless AMETHYST came back on the air again with more detailed information, the British government would remain largely ignorant of what had taken place on the Yangtse until such time as a rescue mission could be mounted and succeed in reaching the stranded frigate.

Information was obviously badly needed and without the benefit of aircraft only one immediate option was available. H.M.S. CONSORT was already finalising preparations for her intended departure downriver at lunchtime bound for Shanghai when the news about the AMETHYST came through. She would be in the best position to discover what had happened that morning once she reached the spot where the AMETHYST lay immobilised and could make contact with her. Once CONSORT was aware of the current situation she could radio the news direct to Nanking and Shanghai and stand by for further instructions. It was tacitly understood, however, that if Commander Robertson, the captain of the destroyer, thought there was any chance of his vessel rendering direct help to AMETHYST that opportunity would be taken.

As the cruiser LONDON neared Woosung at the end of her journey from Hong Kong, Madden wired the assistant naval attaché in Shanghai asking whether it would be possible to send at least one tug up river to try and refloat the AMETHYST.[49] He already knew that the frigate BLACK SWAN lay at the anchor in Shanghai and could be used in a support capacity during the rescue mission. Equally his own ship could join in as well. This plan was promptly put into action.

At 10.53 a.m. Madden ordered CONSORT to proceed to the assistance of AMETHYST.[50] It was expected that she would take three to three and a half hours to reach the ship. Robertson asked for as much speed as possible on the passage down the Yangtse and in steaming at between 27 and 29 knots CONSORT, flying seven ensigns, one union flag and two union jacks, made the journey in approximately two hours.[51]

Shortly after issuing his instructions to Commander Robertson, Madden informed the assistant naval attaché in Shanghai that while CONSORT's task was

47. C.O.S. (49) 57th mtg., 20 Apr. 1949, Defe 4/21.

48. S.A.C. (49) 2snd mtg., 20 Apr. 1949, Cab 134/669.

49. FO 2 i/c FES to A.N.A. Shanghai, 200235Z, 20 Apr. 1949, F5544/1219/10, FO 371/75887.

50. FO 2 i/c FES to CONSORT, 200253Z, 20 Apr. 1949, F5544/1219/10, FO 371/75887.

51. Monthly Intelligence Report: May 1949, 41, 10 June 1949, p. 12, Adm 223/229.

designed to elicit as much information from AMETHYST as possible, he thought at this stage that practical assistance was more likely to be rendered by BLACK SWAN, with covering fire if necessary coming from LONDON.[52] Such an idea suggested that direct help for AMETHYST was still many hours away since BLACK SWAN was not expected to reach her before 10.00 a.m. on the following morning (21 April).[53] In the meantime attempts were being made by Urquhart, the British consul-general in Shanghai, to try and procure an aircaft which could be flown up the Yangtse to Nanking. It was his intention to send Howard Williams, a member of the consular staff, with a pilot early in the afternoon, if this could be suitably arranged. Williams task would be to try and establish contact with AMETHYST by Aldis lamp and pass on any information he gleaned thereby to CONSORT using the same method of communication. Unfortunately, the plan had to be shelved as the aircraft he proposed to use for the flight could not be despatched immediately.[54] This in turn meant that it would not reach the AMETHYST before CONSORT did, thus obviating the necessity for its journey in the first place.

At about 11.00 a.m. and for no apparent reason, the shelling of the AMETHYST stopped and the communists merely contented themselves with raking the upper deck with machine gun fire.[68] By this time an inspection of the damage on board ship had revealed that there was an urgent need for running repairs to be made to the steering gear and much else besides below deck. Although the attack had only lasted roughly 90 minutes, AMETHYST had been hit repeatedly throughout this period and the extent of the damage caused by this concentrated shell fire was considerable. Some of the crew were detailed to begin the long process of clearing up the debris of the assault and repairing vital equipment so as to enable the AMETHYST to function as an operational ship again once she had extricated herself from the mud bank on which she lay.[55]

Owing to the persistent sniping from the northern bank, no one was allowed up on deck except the look-out who was on 'B' gun deck. It was he who spotted a vessel approaching at speed from the direction of Nanking at about 1.40 p.m. Although all assumed it to be CONSORT, it was not positively recognised as such for another ten minutes.[56] In the meantime, Weston asked signalman Roberts to go up on deck to signal by Aldis lamp to the on-coming vessel. Roberts, who was unaware as yet that he had been blinded in one eye as a result of the morning's shelling, took up position through an overflow port on 'B' gun deck. Beginning by identifying his ship, he advised the destroyer to turn back if the batteries in the area opened fire upon her. CONSORT replied by asking where the enemy guns were sited and slowed from 27 to 15 knots as she waited for the frigate to reply. It is quite possible that Roberts did not read this signal in the bright sunlight which bathed the Yangtse at this time of the day because nothing is mentioned about it in the official report. In any event, Commander Robertson, the captain of the destroyer, soon discovered the existence of the communist guns without further assistance from the AMETHYST. One field gun opened fire on CONSORT from a distance of about 2,800 yards.

> After two salvoes had near-missed, I opened fire with air bursts and later when emplacements could be distinguished, with H. E. After about four salvoes one gun emplacement was soon to suffer a direct hit, and fire was shifted to the next—a battery of three guns which were effectively silenced, and then a four-gun battery was engaged at 1,200 yards. No hits were obtained mainly due to the large line spread.[57]

At a distance of about one and a half miles from the stranded AMETHYST, Roberts could see that CONSORT was firing all her guns at the communist batteries and was coming under fire herself.[58] When she was about 1400 yards away she at last replied to the Aldis by lamp and Roberts was able to relay the two messages he had been ordered to send to CONSORT. His first dealt with the need for urgent medical atten-

52. FO 2 i/c FES to A.N.A. Shanghai, 200312Z, 20 Apr. 1949, F5544/1219/10, FO 371/76887.

53. Astalusna (Singapore) to Chief of Naval Operations (Washington, D.C.), 201005Z, 20 Apr. 1949, F5590/1219/10, FO 371/75887.

54. A.N.A. Shanghai to N.A. Nanking, 200416Z, 20 Apr. 1949, F5544/1219/10, FO 371/75887.

55. AMETHYST Report, p. 23.

56. While the time mentioned on page 24 of the AMETHYST Report was 2.30 p.m., Robertson maintains in his letter to FO 2 i/c FES, 74/47/1, 26 Apr. 1949, Adm 1/21800, that the frigate was sighted at 1.40 p.m. In the Monthly Intelligence Report (hereafter M.I.R.) for May 1949, No. 41, 10 June 1949, Adm 223/229, the time quoted is 1.45 p.m.

57. AMETHYST Report, p. 24; I. G. Robertson to FO 2 1/c FES, 74/47/1, 26 Apr. 1949, Appendix 1, Adm 1/21800.

58. AMETHYST Report, p. 24.

tion for the wounded, while the second asked CONSORT to set watch on 2990 kilocycles T.C.S. so that further messages could pass between them. AMETHYST's T.C.S. set was operating on batteries at this time and Lieutenant Strain, the flotilla electrical officer, hoped that it would prove strong enough to do the emergency job assigned to it. In the event, however, no communication, other than that by lamp, was exchanged between the two ships. As soon as she had passed the frigate's stern, CONSORT's light flashed out a message asking whether it was possible to tow the AMETHYST off the mud bank and if her main engines were sound. Roberts instructions were relayed to him by Weston and he signalled that a tow was only possible under the present circumstances if the batteries were put out of action beforehand. Even as Roberts frantically tried to send this message, CONSORT disappeared around the bend and was lost to view.[59]

She reappeared soon afterwards having turned a short distance downstream. As she approached the stricken vessel once more she came under intense fire from well hidden 37 mm anti-tank weapons and 105 mm artillery pieces on the northern bank. She received several direct hits, most notably on her bridge, wheelhouse and gunnery control room, sustaining serious casualties among the crew and damaging her steering gear at the same time.[60] During these exchanges CONSORT was firing constantly with every gun at her disposal. According to Geoffrey Birch, her torpedo officer, CONSORT fired anything from 300-400 four and a half inch shells, plus a similar number of smaller calibre at the communist positions, knocking out 8 gun emplacements as she did so.[61] This degree of accuracy could not be maintained once the calculator room had been knocked out of action on the return leg up the Yangtse, since thereafter the gunners aboard CONSORT had to resort to direction finding by using open sights to detect the location of the PLA batteries.[62]

As CONSORT closed with AMETHYST it became clear that the shell fire from the communist batteries was far too heavy for any successful rescue mission to be performed at this time. Both 'A' and 'B' guns had been knocked out, forward supply and director support had been hit and 'X' gun was forced to go into quarters firing. Robertson commenting on the situation wrote later:

> Half a mile from AMETHYST I stopped the ship, turned and proceeded slowly down river firing all the time. We were still coming under accurate anti-tank fire from point-blank range. As my Medical Officer was overwhelmed with our casualties I reluctantly decided to withdraw.[63]

CONSORT steamed past the forlorn figure of the AMETHYST for the last time and ploughed her way down river out of the original danger area and on towards Kiangyin.[64]

Although discouraging, the events of the afternoon did not entirely destroy hope of any further rescue operation being mounted after dark. Weston was certainly more inclined to optimism on this score than he would have been had he known the extent of the damage inflicted upon CONSORT by the engagement with the PLA. Not only had ten of her crew been killed and four seriously wounded but, as a result of the shelling, she now had to steer from aft, an unexpected and far more complicated manoeuvre than normal particularly on one of the most hazardous stretches of river in the world.[65]

Weston had already decided to try and refloat the AMETHYST after nightfall when it was hoped that most of the temporary repair work would have been completed to make the ship serviceable again. Until such an attempt could be made work proceeded on board at a hectic pace; the steering gear and the telegraphs were restored to working order, the hole in the tiller flat was plugged, the wireless set repaired, fuel stocks were transferred and stores from the forward part of the ship were placed ready for jettisoning once darkness came.[66]

59. *Ibid;* Earl, pp. 38-9.

60. By the time she reached Kiangyin and anchored for the night at 4.45 p.m., CONSORT had been hit by 68 projectiles; 5 were of 105 mm, 12—75 mm, 37—37 mm and 14 from small arms. Action Damage Report of H.M.S. CONSORT, MO41/50, I. G. Robertson to FO 2 i/c FES, 8 Oct. 1949, Adm 1/21800.

61. *The Daily Telegraph,* 22 April 1949. For a summary of CONSORT's report on the Yangtse river action see FO 2 i/c FES to Adm., 111423Z, 12 May 1949, F6748/1219/10, FO 371/75891.

62. *The Daily Telegraph,* 22 April 1949.

63. I. G. Robertson to FO 2 i/c FES, 74/47/1, 26 Apr. 1949, Appendix I, Adm 1/21800.

64. Some ten minutes after leaving the vicinity of Rose Island, CONSORT came in for another pounding from a PLA battery on the northern bank of the river. This one was established on Low Island and succeeded in knocking out the gyro, W/T office and T.S. as well as inflicting 15 further casualties among the crew.
M.I.R., May 1949, 41, 10 June 1949, p. 12, Adm 223/229.

65. *Ibid;* Earl, p. 40.

66. Weston, p. 250.

At the same time the problems of administering to the wounded on board were causing further grave concern; apart from the rapidly dwindling stock of morphia and other pain relieving drugs available to the seriously ill, the sad fact was that until the injured were hospitalised and given the urgent medical attention they needed, their condition could only be expected to worsen. Weston was only too well aware of this depressing situation and it bolstered his resolve to try to extricate the AMETHYST from her present precarious position and make a dash for it to Nanking, if that still proved possible.[67]

As BLACK SWAN and LONDON forged their way up river towards Kiangyin during the afternoon, Madden received what updated information was available from CONSORT. He knew, for instance, that she had left Nanking flying seven ensigns and three union jacks.[68] Despite being easily recognisable as a British warship, she had been heavily engaged by field artillery on her way down river but had suffered only slight damage in actually reaching Rose Island, the place where AMETHYST lay aground.[69] As the afternoon wore on, however, the news CONSORT had to relay took on a more sombre form as reports were filed of serious casualties amongst her crew.[70]

Although Stevenson, the British ambassador, had acted swiftly to inform the nationalist naval headquarters and its ministry of defence about the attack on the AMETHYST and of Madden's decision to send rescue ships from Nanking and Shanghai to bring assistance to her, he recognised from the outset that there was no guarantee his message would be relayed further or even if it was whether it would actually get through or not.[71] Lacking knowledge about the extent to which information could be passed speedily and effectively within the KMT and confidence in the discipline and competence of its troops in the field, the ambassador could only wait and hope for the best.

Unfortunately, if anything, there was a heightened sense of unease when addressing the same issue to the communists. Apart from any other difficulties he would encounter, the impossibility of communicating directly with any units of the PLA from his embassy in Nanking meant that Stevenson had first to inform the British consul in Peking about what happened and leave it up to him to try and establish contact with the military high command of the communist forces.[72] This would undoubtedly take some time and even if this body agreed to receive his message, which was extremely unlikely in view of the hostile reception he had received at the PLA headquarters in the past, it was still anyone's guess as to whether the communists would issue a specific set of orders to their area commanders, or to those manning the batteries along the banks of the Yangtse, asking them to respect the rights of British ships to free movement on the river for humanitarian purposes.

Whatever had led to the original incident involving the AMETHYST, whether it had begun by being a ghastly misunderstanding or a deliberate act of provocation, the shelling of CONSORT complicated matters considerably. Although a case of mistaken identity might seem a rather inadequate excuse for the attack on CONSORT, some other compelling reasons might be advanced to explain the behaviour of those who had opened fire on the destroyer. From the wireless messages relayed by CONSORT as she steamed down river towards Kiangyin, the British knew that the AMETHYST lay aground on the north-western side of Rose Island. Her position was such that there was a greater likelihood that the initial shelling had come from the northern shore and most probably from the communist gun batteries situated in this area. This much would be confirmed by the AMETHYST when she came back on the air later in the evening. By then CONSORT had made it clear that she too had been fired upon solely from the communist side.[73]

For the time being, however, establishing the guilt or innocence of the parties to the dispute was of subordinate importance to getting aid to those wounded in these two naval engagements. Now that CONSORT's efforts had been beaten off, with an unacceptably high casualty toll among her crew, no one could afford to underestimate the difficulty of launching a successful rescue bid for the AMETHYST, particularly if the

67. AMETHYST Report, p. 25.

68. CONSORT to FO 2 i/c FES, 200442Z, 20 Apr. 1949, F5544/1219/10, FO 371/75887.

69. CONSORT to FO 2 i/c FES, 200704Z, 20 Apr. 1949, F5589/1219/10, FO 371/75887.

70. S.O.F.F. 3 to FO 2 i/c FES, 201041Z, 20 Apr. 1949, F5590/1219/10, FO371/75887.

71. Stevenson to F.O., 463, 21 Apr. 1949, F5598/1219/10, FO 371/75887; minute by P. D. Coates, 20 Apr. 1949, F5483/1219/10, FO 371/75887.

72. Stevenson to Peking, 49, 21 Apr. 1949, F5595/1219/10, FO 371/75887.

73. AMETHYST to FO 2 i/c FES, 220140Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

latter was still unable to refloat herself. Much would ultimately depend upon the ability or otherwise of AMETHYST to help herself. If she could become mobile again before the following morning when BLACK SWAN and LONDON were expected to reach her, arrangements could then be made to escort her back to Shanghai where better hospital and repair facilities existed than at Nanking her original destination.[74]

While the wheels of government were beginning to grind slowly back in Britain, Madden's flagship the cruiser H.M.S. LONDON was nearing the port of Kiangyin as the evening set in. After being in frequent contact with other ships under his command since the emergency began and recently learning of the plight of the CONSORT, the flag officer sent a secret cypher to the naval attaché in Nanking in which he put forward the following suggestion:-

> Request you will inform Ambassador that it may be necessary to bombard north shore of Yangtze to reduce opposition in vicinity of AMETHYST before another attempt at rescue operations is made. Acknowledge.[75]

In contemplating such a grave option, Madden was keenly aware of the need to silence those batteries on the northern shore which had caused all the trouble. If they could be destroyed, the chances of staging a successful rescue bid for the AMETHYST with the minimum number of casualties would increase considerably. There was no guarantee, of course, that either BLACK SWAN or LONDON could put these guns out of action and if they did not the whole operation would be imperilled. Nor could he fail to understand that sanctioning the use of firepower against the communists was bound to aggravate the existing diplomatic situation regardless of whether the AMETHYST escaped or not. Therefore, any form of bombardment was likely to remain a last resort, unless used in self-defence. By the time an acknowledgement of this message was despatched four hours later by Captain Vernon Donaldson, the naval attaché, far more information was at the disposal of those dealing with the crisis at the British embassy in Nanking and at the centre of naval operations on board H.M.S. LONDON at anchor in Kiangyin.[76]

At 8.00 p.m. the assistant naval attaché in Shanghai wired the flag officer with the news that the tug SEA EAGLE would sail up river from Shanghai in the morning and reach Kiangyin at about 4.00 p.m. on 21 April. He also informed Madden that an additional tug was being recalled from Amoy for use on the Yangtse if required.[77] A tug would only be useful in certain well defined contingencies; most notably if AMETHYST was severely disabled and could not proceed under her own steam. But even then a tug could only venture north of Kiangyin into the danger area, if a safe passage for it to do so had been granted by the two belligerents in the civil war. If such an arrangement could not be devised, a tug's utility was strictly limited since it was unarmed and not designed to defend itself against hostile fire. Whether used or not, its presence as a support craft in the task force which was being assembled on the Yangtse represented in a small way, perhaps, the determination of the British to do everything in their power to bring the crisis surrounding the AMETHYST to a swift and successful conclusion.

Just over a couple of hours later Madden received even more encouraging news this time from the commandant of the British forces in Hong Kong to the effect that he had arranged for a Sunderland flying boat to make the trip up the Yangtse with medical supplies:

> A.O.C. does not wish to land at Nanking unless it is safe and essential that Sunderland should do so. He requests exact dropping position and desires to make flight direct from Hong Kong to dropping position, to make drop and return Hong Kong without landing.[78]

This really would be a significant development, particularly if there was trouble in towing the AMETHYST away from Rose Island and the mission had to be temporarily abandoned leaving the frigate still at the mercy of the communist batteries. It was revealed in a later message that the flying boat would be carrying fresh supplies of water and about 400 pounds of provisions and would have an RAF doctor on board. Whether he was to be transferred to the AMETHYST or not was unclear.[79] It would appear to make the most sense, but there was no definite commitment one way or the other at this stage.

74. Stevenson to Peking, 48, 21 Apr. 1949, F5551/1219/10, FO 371/75887.

75. FO 2 i/c FES to N.A. Nanking, 201147Z, 20 Apr. 1949, Adm 116/5696.

76. N.A. Nanking to FO 2 i/c FES, 201543Z, 21 Apr. 1949, Adm 116/5696.

77. A.N.A. Shanghai to FO 2 i/c FES, 201200Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

78. Com. Hong Kong to FO 2 i/c FES, 201425Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

79. Com. Hong Kong to FO 2 i/c FES, 201528Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

Meanwhile back on the Yangtse, Gunner Monaghan had returned to the AMETHYST at about 7.15 p.m. with Wilkinson and the nine other ratings who had been hiding close to the shore of Rose Island all the afternoon. Once aboard Monaghan and Wilkinson reported to Weston and a decision was reached to flash the boilers and raise steam prior to making an effort to get off the mud bank later in the evening when sufficient pressure had been reached to make such an attempt feasible. Despite the gloomy nature of the latest intelligence reports brought back from the KMT headquarters, Weston still clung stubbornly to the increasingly forlorn hope that CONSORT might reappear after dark. As a result, he was still not inclined to land any more of the wounded at this stage but preferred to wait upon whatever developments might take place in the next few hours.[80]

While the engine room at once became a centre of activity and anticipated excitement, the failure of the Chinese pilot to come back on board the AMETHYST severely handicapped the chances of the ship steaming under her own power to relative safety. Although the loss of the pilot was a bitter blow, Weston still resolved to try and escape if he could.

Shortly before news of the Sunderland first reached the flag officer, AMETHYST put out a message at about 10.00 p.m. which indicated that she was still aground on Rose Island, though efforts would be made to try and refloat herself once the repairs to vital equipment on board had been satisfactorily completed. In her message AMETHYST revealed that as a result of the attack on the ship by the communists, approximately 60 of his crew, including 4 wounded ratings, were making their way to the nearest large town in nationalist hands and that of those left behind on board 17 lay dead and a further 20 were seriously injured, one of which was the captain, Lieutenant Commander Skinner.[81]

This information confirmed what CONSORT had already disclosed about her own voyage down river, namely, that both ships were fired on from the northern bank only and that the firing zone extended in all about 12 miles from Rose Island to Low Island.[82] News of this nature, which specifically pinned the blame on the communists for both incidents, was a matter of the highest importance and was quickly exchanged with the embassy in Nanking. It increased Madden's natural anxiety for an agreement to be hammered out with the PLA in order to enable a vessel or vessels of the British Far Eastern fleet to recover the AMETHYST and supervise her withdrawal from the Yangtse without further risk to life or limb. His agitation grew when Donaldson informed him that although everything had been done to pass mesages concerning the AMETHYST to the military high command in Peking, it was thought unlikely that any instructions from the communist hierarchy could reach the front line troops for several days.[83] Even then, no guarantee could be given about whether those manning the batteries on the Yangtse would be actually willing to respect these orders or not.

By 10.30 p.m. power was restored to the ship, the engine room was ordered to obey telegraphs and W/T contact was finally made with Hong Kong.[84] Weston was informed by Wilkinson that the time had arrived to try and coax the AMETHYST off the mud. Weston ordered both engines full astern, but the manoeuvre did not succeed in freeing the ship. Whatever variations Wilkinson tried in the following hour, whether port engine full astern and starboard full ahead or vice versa, the result was the same; AMETHYST remained stuck in the mud.[85] Having failed in these attempts, the acting-captain had little alternative but to reduce the weight of the ship on the forecastle. A party was sent to the upper deck shortly before midnight to begin removing and throwing overboard any heavy items of equipment that were not permanent fixtures and which could be safely dispensed with. At the same time the engine room was ordered to begin pumping about ten tons of oil overboard from numbers one and two fuel tanks.[86]

One minute before midnight Wilkinson was ordered by Weston to renew his efforts to free the ship. As

80. AMETHYST Report, p. 25; Earl, p. 48.

81. AMETHYST to FO 2 i/c FES, 201400Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

82. FO 2 i/c FES to N.A. Nanking, 201434Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

83. N.A. Nanking to FO 2 i/c FES, 201516Z, 20 Apr. 1949, F5591/1219/10, FO 371/75887.

84. AMETHYST Report, p. 25.

85. Earl, pp. 48-9.

86. Report by Lieutenant P.E.C. Berger on action of H.M.S. AMETHYST on 20 Apr. 1949, undated, Adm 1/21299; AMETHYST Report, p. 26.

AMETHYST's fully laden oil fuel capacity was 391 tons of furnace fuel and 28.6 tons of diesel. At the time she went aground she had 365 tons of furnace fuel and 14 tons of diesel left in her tanks.

Wilkinson, "Engineering Exploits," p. 419, AMETHYST Scrapbook, II, I.W.M.

before he began by employing variations of engine power and at 00.15 a.m. some movement astern was detected by those assembled on the bridge. It soon became obvious that AMETHYST had at last forced herself off the mud bank and had returned to the Yangtse. Success was tinged with failure, however, for the jerking motion of the frigate as she clawed her way back into the river managed to disattach the whaler boat from its position alongside and set it free to drift off with the current.[87] This mishap apart, the first few minutes of the AMETHYST's journey were uneventful; but as she approached the Tan-tu Reach, a long sweeping bend in the river where the Yangtse narrows considerably, she encountered small arms fire from the northern bank. Without either an accurate chart or a local pilot who knew what hazards lay ahead, it was decided to put about and return a couple of miles down river to anchor for the night at a spot close to the southern shore opposite Ta-hsin-wei, not far from where the tributary of the Hsiao-ho joins the Yangtse and about two miles from her former unscheduled 'berth' on Rose Island.[88] Here the river widens so appreciably that by hugging the southern bank the ship avoided being strafed by machine gun fire from the communist positions on the northern shore.

Shortly after midnight AMETHYST put out a wireless message for the naval authorities in Hong Kong, in which she asked the Far East station to send all future messages to her in plain language as her confidential books and type 'X' cypher codes had been destroyed.[89] This meant that secrecy had to be forsaken for clarity and that anyone monitoring the wavelength on which AMETHYST was sending and receiving messages would now be able to read all the communications which passed between the ship and the shore or other H.M. vessels without delay or difficulty.

After hoving to at 1.30 a.m., AMETHYST reported that she had extricated herself from the mud bank off Rose Island and was now anchored in position 32° 16.5 minutes north and latitude 119° 42.5 minutes east. Besides several holes in her hull, the tiller flat had also received a direct hit on the waterline, but the steering gear and telegraph were operational. Despite the fact that out of the ship's company still on board only four officers and fifty ratings could be said to be fully effective, AMETHYST still believed she had enough able bodied men to steam the ship up or down the Yangtse as directed. She acknowledged, however, that matters were not quite that simple as she had lost the services of her two local pilots and would have to try and make do without the relevant chart of the river, yet another victim of the initial onslaught that morning. Moreover, there were still many other difficulties to be faced, not the least being the urgent need to do something for the seriously wounded, eight of whom had to date only received first aid for their injuries. Referring to the flight of the Sunderland next day, the AMETHYST requested urgent medical stores to add to the heavily depleted stock of morphia and dressings which was on board, but pointed out that she no longer had any boats with which to collect the dropped supplies and that there was still small arms fire coming from the northern bank.[90]

Despite the enormity of the problems which AMETHYST still faced, the very fact that she had refloated herself and was capable of making her own way on the river was news of the most reassuring kind for the British diplomatic and naval staff. Apart from any other considerations, it appeared to simplify the procedure for recovering the frigate, because it avoided both the need to take AMETHYST in tow and the hazards that were associated with trying to mount such an operation. Madden's natural feeling of elation at this news was tempered by the recognition that the ship remained in a vulnerable spot and much remained to be done before AMETHYST could regain her freedom. After consulting his chart of the Yangtse, he recommended that she shift berth to what looked like a less exposed and dangerous position at least three miles further west of her present location.[91]

This proved to be a far more difficult manoeuvre than Madden had expected. AMETHYST indicated the impossibility of following the flag officer's instructions in her next signal to H.M.S. LONDON.

Am anchored in position 010 Tai Wing Chow South West corner 7½ cables to keep maximum distance from fire from

87. *Ibid.*

88. Track Chart of H.M.S. AMETHYST's movements on the Yangtse, 20-23 April 1949, attached to AMETHYST Report.

89. AMETHYST to Hong Kong Wireless, 201610Z, 20 Apr. 1949, Adm 116/5696.

90. AMETHYST to FO 2 i/c FES, 201818Z, 20 Apr. 1949, F5592/1219/10, FO 371/75887.

91. FO 2 i/c FES to AMETHYST, 201950Z, 20 Apr. 1949, F5592/1219/10, FO 371/75887.

North Bank and according to remains of chart cannot shift three miles further west.[92]

Once again the realisation that much remained to be done before this rescue operation could succeed came home to those on board the cruiser at Kiangyin. If the communists were going to dispute the request of the British for permission to retrieve their frigate, the next few hours would witness a most dramatic confrontation on the Yangtse, putting at risk Britain's hitherto professed claim of neutrality in the civil war and any desire it had to remain on reasonably good terms with the C.C.P. and its military arm the PLA. In such a situation the British naval forces would need to be at their most disciplined and fortunate if they were to emerge triumphant from this grim ordeal.

In preparation for it, the flag officer passed a message to Hong Kong at about 9.00 a.m. on Thursday morning (21 April) strongly recommending that the Sunderland flying boat should not try to land close to the AMETHYST, but at a quiet spot on the river near to Bate Point close to where the BLACK SWAN would be.[93] Alert to the unpredictable and potentially explosive nature of the morning's proceedings, Madden relayed his instructions to the commanding officers of the AMETHYST, BLACK SWAN and LONDON at 9.37 a.m., setting out the rescue plan in only the broadest outline.

As there seems to be no chance of an understanding with the opposition in the near future and as I consider AMETHYST must have early assistance intend to take LONDON up to her anchorage and escort her down river as soon as possible. AMETHYST is to be under way in her present position with steam for maximum speed by 1100H.[94]

Immediately thereafter Madden despatched another signal to BLACK SWAN ordering her to proceed independently of LONDON and station herself south of Low Island at a distance which would enable her to provide indirect covering fire on that island, the point at which CONSORT had been fired upon and badly damaged, should she be called upon to do so by LONDON.[95] As the two British warships forged up the Yangtse closing on their beleaguered target, the air of suspense and anticipation settled heavily over the men in all the vessels. Now that all the precautionary moves had been made, all that remained to be done was to await the outcome of the rescue mission and hope for the best, though being prepared for the worst.

After spending a relatively peaceful night, the ship's crew were going about their various tasks on the following morning when at about 9.15 a.m. a sampan was spotted with two men on board approaching the ship from the southern bank. As the first visitors to come alongside since the attack on the previous day, the arrival of the two nationalists aroused great interest among the ship's company. Lacking a trained interpreter and having to make do with the inexpert translation of those who had to be pressed into service for this purpose, Weston gathered that the two men had come to offer assistance to the wounded. This presumably meant that the KMT were willing to make arrangements to evacuate the wounded by ship to hospitals behind the nationalist lines. It was a generous offer but one he felt he had to refuse, because he expected the Sunderland flying boat to airlift the injured out of the danger area to a British military hospital either in Shanghai or further south later that same day. Far from being discouraged by this negative reply, the nationalists' willingness to help was such that they offered to send sampans to assist in transferring the wounded to the aircraft once it had landed on the Yangtse. Once these messages had been exchanged, the nationalists withdrew and AMETHYST was on her own once again.[96]

Within an hour French, the telegraphist, had received notification from Madden about the impending arrival on the scene of both LONDON and BLACK SWAN and his instructions requiring AMETHYST to have steam up for maximum speed by 11.00 a.m.[97] Weston informed the crew immediately. Jubilant the men returned to their duties with renewed vigour knowing there was little time to be lost, for although the flag officer was to put the estimated time of arrival back by thirty minutes, there was still little more than an hour even then to go before the rendezvous would be made.

In the interim period two more nationalist vessels drew alongside. At about 10.15 a.m. two army officers came onboard extending similar offers of assistance to

92. AMETHYST to FO 2 i/c FES, 202150Z, 21 Apr. 1949, F5593/1219/10, FO 371/75887.

93. FO 2 i/c FES to Com. Hong Kong, 210058Z, 21 Apr. 1949, F5594/1219/10, FO 371/75887.

94. FO 2 i/c FES to LONDON, BLACK SWAN, AMETHYST, N.A. Nanking, 210137Z, 21 Apr. 1949, F5594/1219/10, FO 371/75887.

95. FO 2 i/c FES to BLACK SWAN, 210140Z, 21 Apr. 1949, F5594/1219/10, FO 371/75887.

96. AMETHYST Report, p. 26.

97. Weston, p. 250.

that which their predecessors had made. On this occasion Weston decided to make certain provisional arrangements with them for landing the injured should the AMETHYST fail to leave with H.M.S. LONDON, but otherwise politely declined their offer of immediate help. About thirty minutes later a junior naval officer commanding an L.C.M. enquired whether he could be of any assistance, but owing to the imminence of LONDON's arrival on the scene his kind offer was also refused.[98]

At 11.30 a.m. the AMETHYST weighed anchor and moved out into the centre of the river poised for action. As she circled slowly in the river, the communists fired a few rounds at the ship from the San-chiang-ying batteries. Although she was not hit, the AMETHYST moved back to her original position and dropped anchor again at 11.50 a.m. facing down river. At once the firing stopped.[99] By this time Weston and the men aboard the AMETHYST were beginning to become anxious over the non-arrival of LONDON, particularly as they had heard an exchange of gunfire in the distance which they had taken to be the cruiser encountering opposition from the communist forces below Rose Island.[100]

Their assumption had proved to be correct. LONDON, festooned with 11 union jacks and flying a large white flag, sixteen feet square, had closed up for action stations at 10.26 a.m.[101] After weighing anchor, she had followed BLACK SWAN up river some 8 cables astern of the frigate. Within 7 minutes gunfire had been spotted coming from a battery situated on the north bank of the river at Liu-wei-chiang, a short distance north of Bate Point Beacon.[102] BLACK SWAN had opened fire at it almost immediately. LONDON, conscious of the need not to enflame matters further, was under general instructions not to fire except in self defence. This commendable restraint almost certainly explains her failure to strike back instantly at the battery that had unleased the first shots of the morning. Her apparent reluctance to engage the PLA artillery was not matched by a similar willingness to avoid aggravating matters on the part of the communist gunners. A volley of 75 mm and 105 mm shells soon found their target on various parts of the cruiser. Once struck LONDON did not hesitate any longer; her full complement of guns swiftly beat out an uncompromising reply for three to four minutes before the battery fell silent. Neither British vessel could be certain of why the shelling stopped when it did, although the most likely reason was that the PLA battery had been knocked out by the concentrated fire of the two ships.[103]

After this somewhat unnerving experience, LONDON increased her speed to 25 knots. At this rate she swiftly overhauled and then forged ahead of the frigate. She had moved about 3 miles ahead of BLACK SWAN and was passing the southern part of Beaver Island at 11.04 a.m. when a battery situated to its south east suddenly opened fire upon her with startling success. At least one shell struck the bridge superstructure, hangar and boat decks scattering crew and shrapnel in various directions. Two minutes later another shell smashed into the bridge killing the Chinese pilot instantly, seriously injuring the navigating officer and wounding two others, including Captain P.G.L. Cazelet, apart from wrecking vital instruments and disrupting communications on the ship.[104] Cazelet estimated that LONDON was still some 19 miles from AMETHYST when Vice Admiral Madden ordered him at 11.11 a.m. to give up the attempt to reach the frigate and turn back. There was scarcely any other decision which could have been reached under the circumstances as the ship now had to be controlled from the Emergency Conning Position behind the funnels. This would have been bad enough without the added complication of having to contend with the unwelcome attentions of a hostile army able to make reasonably effective use of the 4″ gun batteries, howitzers and anti-tank weapons at its disposal. Despite LONDON's considerable attributes, she remained vulnerable to the high velocity 37 mm armour pierc-

98. AMETHYST Report, p. 26.

99. *Ibid.*

100. Earl, p. 61.

101. Report by J. Hodge (hereafter Hodge), 221/139, 28 Apr. 1949, p. 1, in letter C.O. H.M.S. LONDON (Capt. P.G.L. Cazelet) to Com. Hong Kong, 439/139, M2158/49, 24 May 1949, Adm 1/21508.

102. According to BLACK SWAN's Action Damage Report {P.R. 4186/49, in C.O. H.M.S. BLACK SWAN (Capt. A.D.H. Jay) to FO 2 i/c FES, 15 June 1949, Adm 1/21312}, the battery was situated 1.6 miles from Bate Point Beacon. In a map drawn on 15 May 1949 and found in Vice Admiral Sir Ballin Robertshaw's papers, however, the distance appears to have been closer to 3 miles. Robertshaw Collection, 72/75/1, I.W.M.

103. Cazelet to Com. Hong Kong, 439/139, 24 May 1949, Adm 1/21508 and Hodge, p. 2; see also Narrative Report by Capt. A. D. H. Jay in his letter to FO 2 i/c FES, 15 June 1949, Adm 1/21312.

104. Hodge, p. 2.

ing shells which the communists possessed, for these were capable of penetrating even the extra thick, protective steel walls of the turrets and gunhouse of the cruiser.[105]

Staging a withdrawal from her vulnerable position in the Yangtse was to prove to be a quite difficult manoeuvre for LONDON to make as it involved executing a tight 180° turn in the navigable part of the river while under accurate and sustained bombardment from the shore which lay less than a mile away. Unfortunately, her problems did not end there as the downward passage proved to be far worse than anything experienced on the journey up river. According to a report drawn up a few days later by John Hodge, second in command to Cazelet, 5 batteries fired on both LONDON and that of BLACK SWAN as they made haste to reach the relative safety of Kiangyin. By 1.40 p.m., the time when the last of these batteries ceased firing, LONDON had been subjected to 48 minutes of actual shelling spread over three and a quarter hours. During this period she had sustained 24 holes in her port side as well as a large number of dents on other parts of the ship from shells that had struck the vessel but failed to explode on impact. In reply, LONDON, although forced to operate for much of the time on local as distinct from remote control direction finding, had still managed to fire a total of 449 rounds from her 4″ guns and 155 rounds of high explosive shells from her 8″ guns at the communist battery positions on the banks of the Yangtse.[106] As Hodge revealed a little while later:

> It is difficult to assess the damage and casualties inflicted on the opposition, but at least eight direct hits with 8″ H.E. shell were obtained on the 4″ batteries at an average range of less than 1500 yards. In addition 4″ air bursts and close range direct fire must have caused many casualties in the target area.[107]

From her part in the affair, BLACK SWAN limped back to Kiangyin nursing four large holes which had been gouged out of her port side and with a five and a half degree list to starboard, testimony to the accuracy of the Bate Point Battery and one established further east towards Kiangyin. Throughout this ordeal, BLACK SWAN had been fortunate in only sustaining seven casualties amongst her crew, a figure which paled beside that of the grim toll inflicted upon LONDON in her vain attempt to rescue the AMETHYST. She returned to Kiangyin with 13 of her men killed, 14 seriously wounded and another 40 injured.[108]

Such high losses bore witness to the view held earlier in the day by Madden and Cazelet that if the PLA was determined to thwart any naval mission to retrieve the AMETHYST it could do so regardless of what ships were sent to escort the frigate back to port. Sadly both men had also been of the opinion that against what was termed "light and sporadic opposition," a rescue operation was likely to succeed and since both seemed to live in hope that there would be no opposition at all, the flag officer had given his approval for the passage up river.[109] It was to be a further tragic mistake made by Madden, compounding his original blunder of sending AMETHYST up to Nanking two days previously. What LONDON was supposed to do once she reached AMETHYST had not been spelt out in advance. One may presume that Madden felt that as he was on board the cruiser, he would be in the best position to give specific orders about what to do once LONDON made her rendezvous with the frigate south-west of Rose Island. It seems probable that he believed a show of force by the Royal Navy was likely to make all the difference, cowing the PLA gunners into awed, if resentful, silence and thereby enabling AMETHYST to be escorted down river towards Kiangyin and Shanghai with BLACK SWAN leading and LONDON bringing up the rear of the convoy. These fine hopes had been rudely shattered within minutes of their departure, as we have seen, yet the mission had not been aborted until LONDON had suffered extensive damage, making the prospects of her being able to reach the AMETHYST and bring the frigate back to safety too bleak to contemplate.

At 12.15 p.m., more than an hour after Madden had decided that the rescue operation would have to be abandoned, French received confirmation that LONDON was withdrawing from the area. Her message simply read: "Am sorry we cannot help you to-day.

105. *Ibid.*, pp. 2-3; *The Times*, 7 September 1949.
According to Robertshaw's map of the Yangtse incident, however, LONDON was somewhere between 13-15 miles from AMETHYST when she was fired upon. He plots her as having turned and set course down river when the distance between the cruiser and the stranded frigate was only 13 miles. Map, 15 May 1949, Robertshaw 72/75/1, I.W.M.

106. *Ibid.*, p. 3; Appendix 'A', pp. 1-3, Appendix 'B', p. 3.

107. *Ibid.*, p. 2.

108. Action Damage Report & Narrative H.M.S. BLACK SWAN, P.R. 4186/49, in Jay to FO 2 i/c FES, 15 June 1949, Adm 1/21312; Hodge, p. 3.

109. Cazelet to Com. Hong Kong, 439/139, M2158/49, 24 May 1949, Adm 1/21508.

We shall keep on trying."[110] This news came as a crushing disappointment to the officers and men aboard the AMETHYST. It appeared to rule out the possibility of a swift end to their confinement on the Yangtse and put in jeopardy all escape plans that relied upon force rather than a negotiated settlement to eventually liberate the frigate. Although the men did not try to dwell on it, the realisation that two British warships had been unable to silence the communist batteries and move beyond their arc of fire was thoroughly depressing.[111]

Madden shared these sentiments as his message to Sir Patrick Brind, the commander-in-chief of the Far East station, showed.

> Have had to order withdrawal of LONDON and BLACK SWAN. All sign of peaceful intent disregarded and heavy fire opened from batteries near Bates Point and on Southern end of Beaver Island this was effectively returned. Cleared(sic) impossible to bring AMETHYST down as even at high speed casualties in LONDON are not inconsiderable and we should lose more than we should gain by attempting it at present. It is considered that the most urgent steps on the highest level should be taken to try to expedite some agreement. N.A. Nanking is requested to keep me currently informed as to any possibility of getting AMETHYST to Nanking.
>
> LONDON, BLACK SWAN are proceeding to Kiang Yin or Berowak it is thought probable rebels are extending their mobile batteries to the East Ward.[112]

Apart from the real danger posed by the communists, there was also an unpredictable, trigger-happy, element within the nationalist forces on the Yangtse front with which the British would have to contend if they were to stage a successful rescue bid for the AMETHYST at some time in the near future. This additional complication to an already vexatious problem was both unwelcome and yet very real as Madden discovered at first hand on the return leg down river to Kiangyin.[113]

He reported encountering brisk opposition to the presence of LONDON on the Yangtse from a nationalist battery opposite Kiangyin. In launching such a surprise attack, the battery managed to inflict considerable damage upon the British cruiser. Madden indicated that this fire was returned, but made no mention of BLACK SWAN in his despatch to Brind. After arriving in Shanghai, the officers of the two warships conferred and came to the conclusion that reasonable grounds for doubt lay in ascribing the blame to errant units of the nationalist army. Nonetheless, as Madden subsequently disclosed in another message to his commander-in-chief:

> Some of the retaliatory fire from LONDON fell in Nationalist territory which evoked signal from Gunboat YAT SEN "Those were ours." BLACK SWAN replied "I have only fired on battery which fired on LONDON."[114]

In this sort of confusion anything was possible and with the communists threatening to cross the Yangtse at any time, the likelihood of a rescue operation being mounted by river now seemed out of the question. Apart from any other considerations, the duel between units of the Royal Navy and the PLA artillery on the Yangtse had exposed for all to see the considerable limitations of a naval force operating in a confined space against an enemy that proved to be difficult to locate and destroy.

Rescue by air was soon ruled out for much the same reason. This meant that unpalatable though it clearly was to the naval authorities in London and Singapore, H.M.S.AMETHYST, even under her own power, had become a hostage to fortune. She would be forced to remain languishing on the Yangtse for more than three months as efforts were made on the diplomatic front to secure her release from communist captivity. In the end, these came to nothing and it was left to the AMETHYST herself to take the initiative and make the audacious and successful dash for freedom with which her name is so closely identified in naval annals. Although this grim episode was to end on a spectacular and triumphant note for the Royal Navy, it ought not to hide the fact that it was essentially an unnecessary experience that should never have occurred in the first place but for the political shortsightedness of those whose responsibility it had been to recommend the stationing of a gunboat at Nanking in the fall of 1948. While the AMETHYST saga ended on an upbeat note for the British, their relations with the Chinese communists were to suffer accordingly. One can scarcely imagine that the benefits of what was essentially a limited extra-territoriality were worth the costs involved.

110. FO 2 i/c FES to C-in-C FES, 210423Z, 21 Apr. 1949, F5595/1219/10, FO 371/75887; FO 2 i/c FES to AMETHYST, 210424Z, 21 Apr. 1949, A.S.L. April, Kerans 69/45/1, I.W.M.

111. AMETHYST Report, p. 26.

112. FO 2 i/c FES to C-in-C FES, 210423Z, 21 Apr. 1949, F5595/1219/10, FO 371/75887.

113. FO 2 i/c FES to C-in-C FES, 210737Z, 21 Apr. 1949, F5851/1219/10, FO 371/75888.

114. FO 2 i/c FES to C-in-C FES, 211435Z, 22 Apr. 1949, F5853/1219/10, FO 371/75888.

Malcolm H. Murfett is a senior lecturer in history at the National University of Singapore and a senior associate member of St. Antony's College, Oxford. While completing his doctorate at New College, Oxford he was principal research assistant to Lord Birkenhead, working on the officially commissioned one-volume biography of Sir Winston Churchill. He is the author of Fool-proof Relations: The Search for Anglo-American Naval Co-operation During the Chamberlain Years, 1937-1940 *(Singapore, 1984) and of a study of British naval involvement in the Chinese civil war which is to be published in 1989 under the title* An Imperial Blunder: Britain, China and the AMETHYST Crisis of 1949.

Legacy of a Saxon King: Royal Prints of Whale Strandings in the Peabody Museum

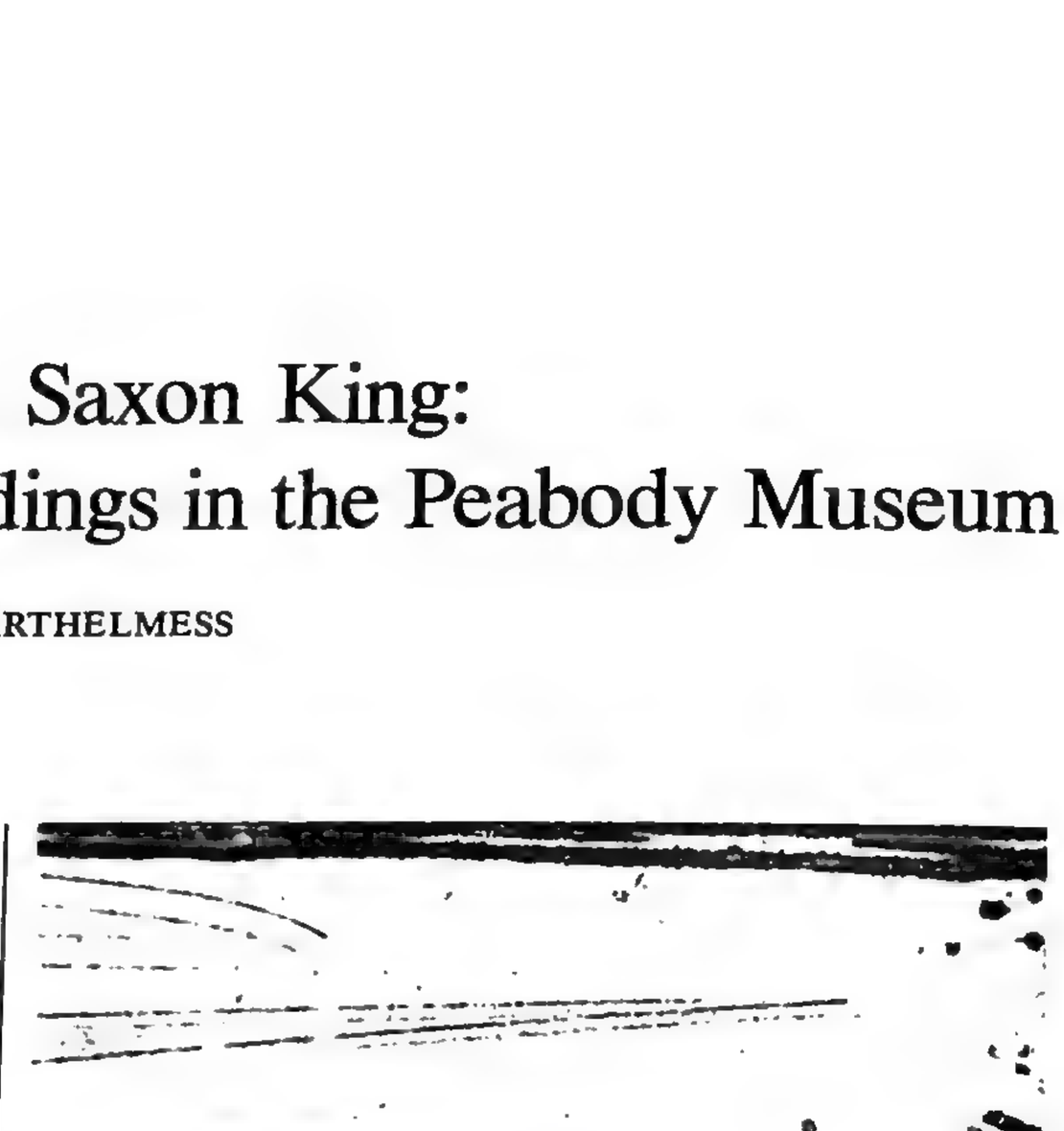
KLAUS BARTHELMESS

About 1815, Friedrich August II (1797-1854), later king of Saxony, began assembling his famous collection of prints and drawings. Dutch masters predominated in this unique art corpus, which numbered more than 100,000 prints and several hundred drawings. After the king's death, part of the precious collection was auctioned off in 1856; another auction, with a considerable section of Dutch etchings and engravings took place at Leipzig on March 20, 1900, under the auspices of C. G. Boerner.[1]

Unnoticed, part of this king's legacy found its way from Saxony into the holdings of the Peabody Museum.

As would be appropriate for the beasts depicted, two of Friedrich August's whales "sounded," that is, disappeared from view, leaving no trace on the art market until they surfaced again in the Francis B. Lothrop collection of whaling prints, recently bequeathed to the Peabody Museum. The inconspicuous, oval accession stamps of the king's collection (illus. #1) on the lower right corner of the prints apparently escaped the notice of all the whale enthusiasts and scholars (including myself) who had the chance to examine the late Mr. Lothrop's magnificent collection. Thus, in Elisabeth Ingall's meticulously compiled catalog,[2] published by the Peabody Museum, one finds no hint at the interesting provenance of the two whale stranding prints.

The anonymous plate showing the partly rotten sperm whale carcass that washed ashore at Noordwijk on the Dutch coast on December 28, 1614, is quite rare and is known only from a relatively recent acquisition



Friedrich August's collectors' stamp used from about 1834 onwards and usually applied to the lower right corner on the face side of the prints in the royal collection. Original size: 5/16 in.

of the Amsterdam Rijksprentenkabinet.[3] The specimen in the Lothrop collection (illus. #2) has been backed with a sheet of thick 19th century paper on which the inventory number has been partly abraded; however, the remains of the pencilled number indicate that the king already owned some 72,000 prints when this one was accessioned.

The other sheet (illus. #3) depicts the whale carcass that stranded in no better condition nearly 150 years

1. Frits Lugt, *Les marques de collections de dessins et d'estampes* (Amsterdam, 1921; reprint & supplement The Hague: Nijhoff, 1956), p. 170f., ## 971 & 972.

2. *Whaling Prints in the Francis B. Lothrop Collection* (Salem, Mass.: Peabody Museum of Salem, 1987), ## 367 & 378.

3. Inv. No. FM(uller) 1293 B.

Sperm whale washed ashore at Noordwijk on December 28, 1614. Anonymous etching, probably Dutch or Flemish. Lothrop collection.

later, on February 20, 1762, near Zandvoort.[4] The reeking "model" nonetheless attracted the interest of—among others[5]—Haarlem artist Vincent van der Vinne (1738-1811), who had two plates etched, giving front and back views of the sunken-in carcass. Despite the half rotten motif this etching, which usually has the two separate plates printed on one sheet, is much sought after these days. The specimen now in the Peabody Museum still has the accession number 72,413 of Friedrich August's collection pencilled on its back.

Sadly, the present whereabouts of another whale stranding scene from the Saxon king's unique collection is unknown. It is a superb drawing by Esaias van den Velde (1587-1630) showing a sperm whale beached after a storm on January 4, 1629, also at Noordwijk.[6] This was not the only time that van den Velde tried his hand on spectacular whales. A similar drawing of the same event is in Amsterdam;[7] and fine prints executed after drawings made by him are in the Lothrop and Kendall Whaling Museum collections.[8] An oil painting acquired by the Kendall Whaling Museum in 1985, did not reveal its magnificent "Veldian" qualities until after a recent restoration in 1987.[9] But the drawing with its Royal Saxonian provenance regrettably has remained submerged (illus. #4). At least in this short miscellany, Friedrich August's sperm whales form a little pod again.

---

4. Ingalls, # 378. Marion V. & Dorothy Brewington, *Kendall Whaling Museum Prints* (Sharon, Mass.: The Kendall Whaling Museum, 1969), # 541.

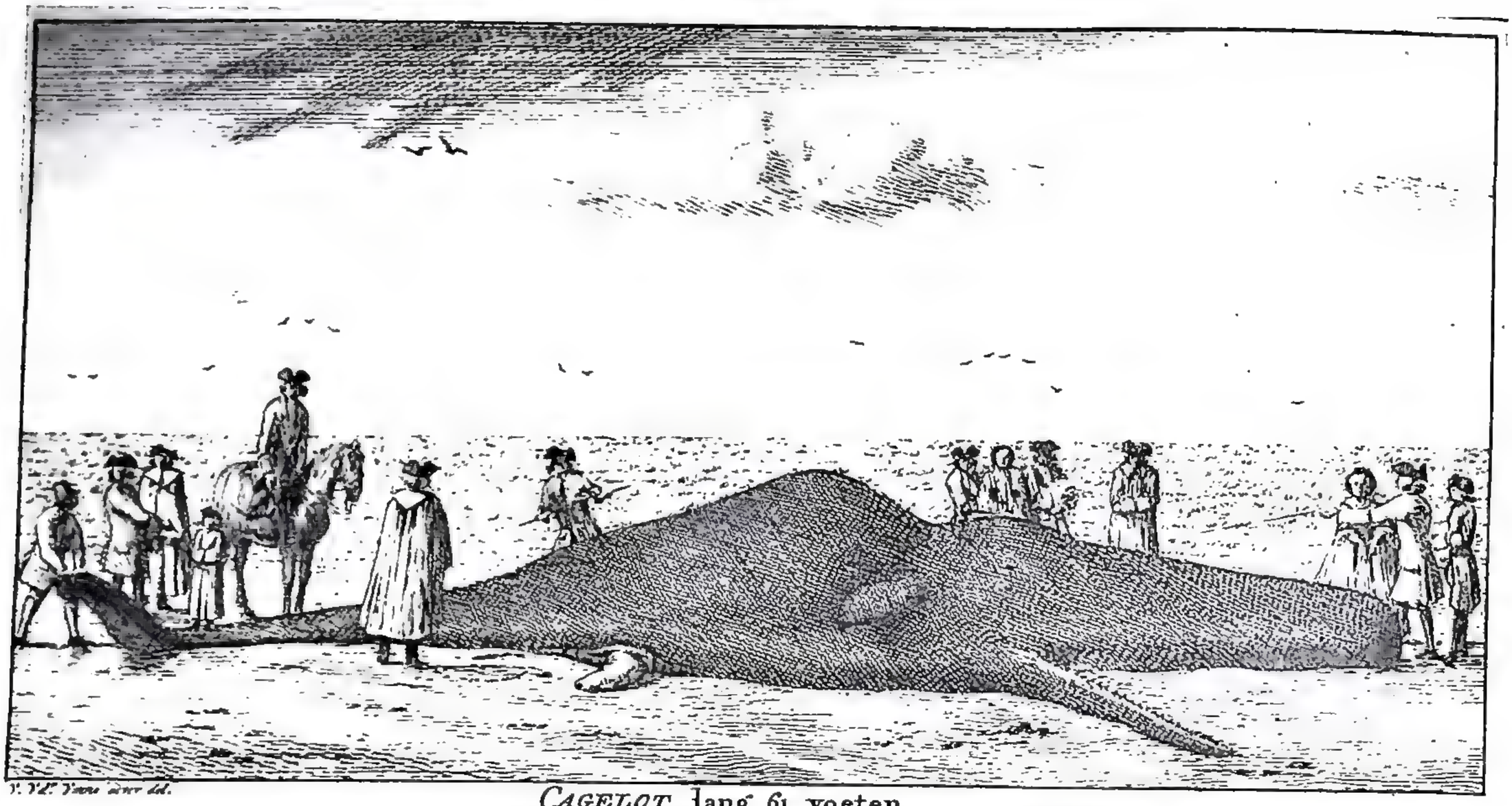
5. Ingalls, ## 376-379. Brewington, ## 538-541.

6. J. W. Niemeyer, "Een gestrande potvis, getekend door Esaias van de Velde," in: *Bulletin van het Rijksmuseum*, Vol. 12, No. 1 (Amsterdam: Rijksmuseum, 1964), pp. 20-23.
George S. Keyes, *Esaias van den Velde 1587-1630* (Groningen: Davaco, 1984), p. 215, # D 6. Van den Velde's oil painting, now in the Kendall Whaling Museum, thought by Keyes (p. 125, # 19) to represent a whale stranding of January 1617 (see note 9) despite its clear iconography which can be traced back to a 1598 drawing made by Hendrick Goltzius (in the Teylers Museum, Haarlem, The Netherlands), possibly may be related to a different stranding event, perhaps the one of 1629. Infrared photos exposing an underlying paint layer appear to actually show a different whale carcass than the one visible now.
Antonius Boudewijn van Deinse, *De fossiele en recente cetacea van Nederland* (Amsterdam: H. J. Paris, 1931), p. 180, # 17 rotely identified the drawing from the Saxon collection to represent the 1614 event.

7. Niemeyer, Fig. 1. Keyes, p. 214, # D 4. Rijksprentenkabinet Inv. No. 1964:33.

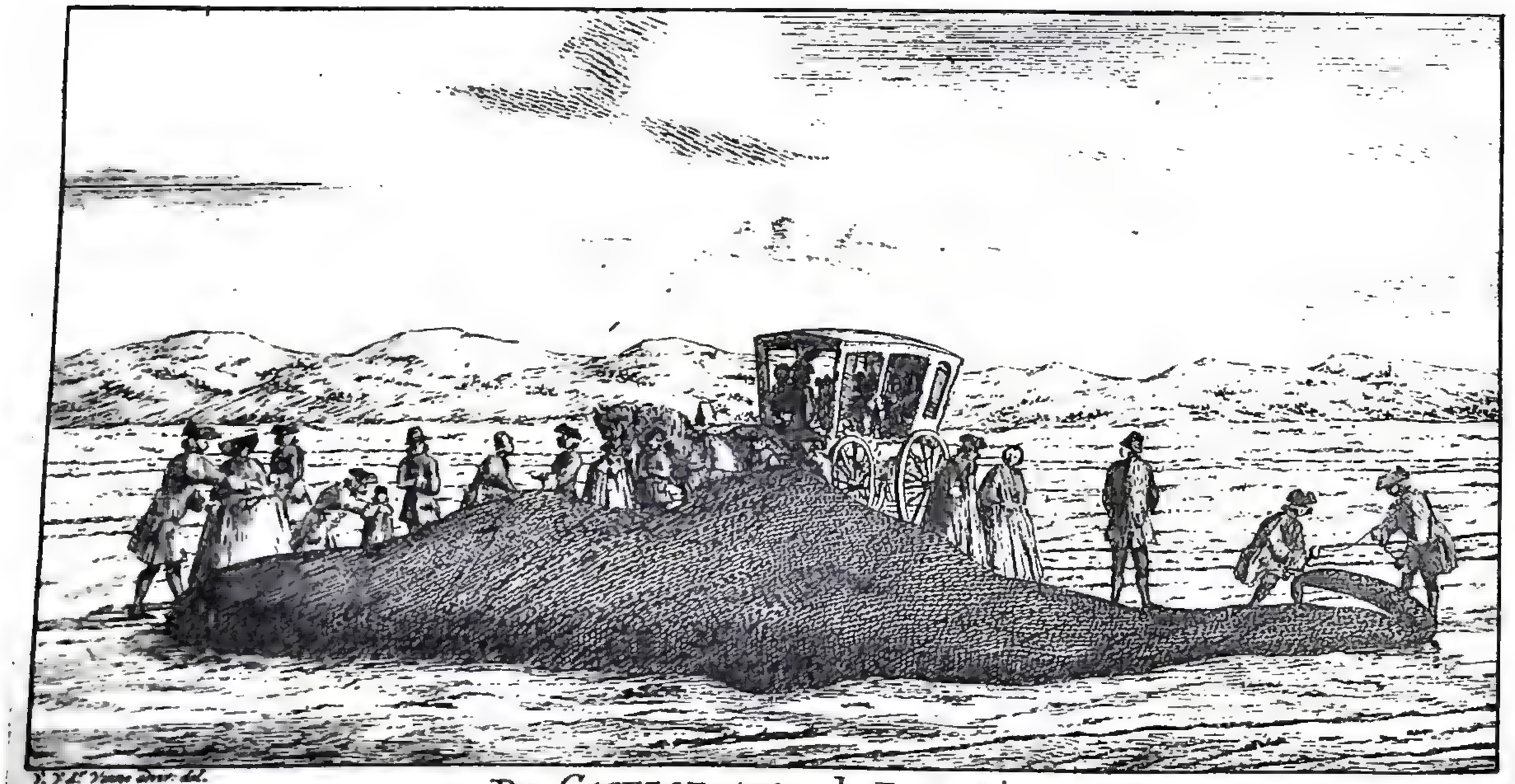
8. Ingalls, # 366. Brewington, ## 535 & 536.

9. Teri Hensick, "Conservation of the painting by Esaias van den Velde 'Whale Stranded between Scheveningen and Katwijk (Holland) . . . , 1617' " (unpublished paper given at the Twelfth Annual Whaling Symposium, The Kendall Whaling Museum, Sharon, Mass., October 17, 1987). Stuart M. Frank, "The Prince's New Clothes: A Netherlandish Masterpiece Revealed," in: *KWM Newsletter*, Vol. 5, No. 2/3 (Sharon, Fall 1987), pp. 8-9. Also illustrated in Keyes, plate 125, and Stuart M. Frank, "A Handful of Treasures," in: Peter Neill (ed.), *Maritime North America (New York: Balsam Press & Harry N. Abrams, 1988), pp. 48-67.*



CAGELOT lang 61 voeten.
den 20 Februari 1762 tusſen Zantvoort en Wyk-op-Zee aangedreeven.

Sperm whale washed ashore near Zandvoort on February 20, 1762. Etching after Vincent van der Vinne. Lothrop collection.



De CAGELOT, tegen de Rug te zien.

Sperm whale stranded at Noordwijk on January 4, 1629. Wash and ink drawing by Esaias van den Velde. Formerly collection of king Friedrich August II of Saxony, Inventory number 100,171. Present whereabouts unknown.

Klaus Barthelmess is a private scholar affiliated with the University of Cologne (Federal Republic of Germany) and Advisory Curator of Iconography and Modern Whaling History to the Kendall Whaling Museum, where he was scholar-in-residence in 1986 and 1987. Author of a book on whaling prints and of several articles on whaling-related topics, he presented the paper "Early Iconography of the Baleen Whale" at the whaling prints symposium held at the Peabody Museum in March 1987, celebrating the publication of the catalog of the Francis B. Lothrop collection.

Recently Processed Manuscript Collections in the Phillips Library at the Peabody Museum of Salem

GREGOR TRINKAUS-RANDALL and ROBERT P. SPINDLER

The Peabody Museum of Salem under a grant from The National Historical Publications and Records Commission has recently completed processing a number of manuscript collections of interest to maritime history scholars and those studying Massachusetts political history. The Phillips Family Papers, 1636-1897, contain the surviving documentation of Salem merchants Stephen Phillips (1761-1838) and Stephen Clarendon Phillips (1801-1857). The Phillips' merchant house owned a fleet of vessels that traded in Europe, Asia and South America, particularly in the ports of Manila, Canton and Calcutta. The Peele Family Papers, 1753-1871, document the activities of Salem merchants Jonathan Peele, Jr. (1731-1809) and William Peele (1773-1835) and are believed not to have been opened since they were wrapped by their creators, c. 1825. The papers include those of Jonathan Peele's schooner *Rajah*, which was the first American vessel to sail directly from Sumatra to Salem with a cargo of pepper. Willard Peele's papers contain a series of letters from Daniel Webster concerning maritime law.

The Stephen Henry Phillips' (1823-1897) Papers, 1835-1896, and James H. Duncan's (1793-1869) Papers, 1668-1910, are notable for their documentation of legal and political affairs in Massachusetts. Stephen H. Phillips was Attorney General of Massachusetts and later of Hawaii in the cabinet of King Kamehameha V. James H. Duncan was an important figure in the political history of eastern Massachusetts and a leading citizen of the town of Haverhill.

The Waters Family Papers, 1637-1931, contain documentation of the voyages of Salem vessels to Europe, Asia and the West Indies. The papers of the schooner *Abeona* describe Joseph Waters' (1758-1833) participation in the African slave trade, while the papers of the Frigate *Essex* document Waters' management of the vessel's construction on behalf of the U.S. Navy. The papers of his son, William Dean Waters (1798-1880), include additional maritime material, as well as information on three local private enterprises: The Naumkeag Steam Company, the Salem and Danvers Aqueduct Company and the Salem Turnpike and the Chelsea Bridge Corporation. Letters between James Devereux Waters (1832-1892), Clifford Crowninshield Waters (1840-?) and other family members provide interesting accounts of life on cotton plantations in South Carolina and Louisiana during the Civil War.

The Devereux Family Papers, 1788-1878, also describe mercantile activities in Europe, Asia and South America. Of particular interest are the papers of the ship *Franklin*, which document the first American voyage to Japan (1799) and describe in detail Japanese customs regarding trade with foreign vessels. The papers of the brig *Osprey* contain protests relating to the detention of the vessel by Portuguese authorities in Rio de Janeiro in 1822. Documents from the schooner *Enterprise* reveal the privateering exploits of James Devereux (1766-1846) during the War of 1812. Because Joseph Waters, William D. Waters and James Devereux shared ownership of a number of merchant vessels, these collections contain a significant of interrelated material.

The Richard Palmer Waters (1801-1887) papers extend from 1831-1939 and document his diplomatic and mercantile career. Waters was the first American Consul at Zanzibar (1836) and acted as an agent for Salem merchants David Pingree and George and Benjamin West. The collection includes correspondence, ships papers and personal journals that explicate Waters' relations with Said Bin Sultan of Zanzibar and his trading activities there and at Madagascar.

The papers of members of Salem's Crowninshield family, possibly the most significant mercantile family in the history of the port, were also processed. The Crowninshield Family Papers extend from 1697-1909 and describe the shipping and privateering exploits of George Crowninshield (1734-1815), his five sons and a

THE PERFECT GIFT!

The American Neptune is America's oldest quarterly journal of maritime history. And since 1941 this unique journal has been published by the Peabody Museum of Salem.

Many distinguished editors have taken the helm of **The American Neptune** through the years. Contributors—including many renowned historians—continue to provide interesting studies of commercial, naval and yachting history.

Marine enthusiasts and scholars alike enjoy **The American Neptune**'s articles and book reviews. The journal's annual listings of exhibits in maritime museums and conferences at important institutions also keep them informed.

Subscribe today to **The American Neptune,** or give a gift subscription to a relative or friend.

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 446 SALEM, MA

POSTAGE WILL BE PAID BY ADDRESSEE

THE AMERICAN NEPTUNE
PEABODY MUSEUM OF SALEM
EAST INDIA SQUARE
SALEM, MA 01970

Please send a subscription to: Gift subscription ☐

NAME

ADDRESS

CITY

STATE

$32.00 per year ($35.00 foreign)
Payment enclosed ☐ Charge my MasterCard ☐ Visa ☐ Amex ☐

Return to: **The American Neptune,** Peabody Museum of Salem,
East India Square, Salem, Massachusetts 01970.

number of relatives. The material includes documentation of the maiden voyage of *Cleopatra's Barge*, the first American ocean-going yacht, papers concerning privateering in the War of 1812 and shipping activities in India and various ports in Europe and America. This collection contains the papers of U.S. Secretary of the Navy, Benjamin W. Crowninshield (1773-1851), which are an important source for studies in naval administration during and after the War of 1812.

The papers of the Benjamin Crowninshield (1758-1836) Family extend from 1757 to 1934 and are comprised of the shipping, business and personal papers of Benjamin, his son Benjamin Jr. and a series of other descendants of Jacob and Hannah (Carlton) Crowninshield. Of particular interest is the additional documentation of the first voyage of *Cleopatra's Barge*, provided by Benjamin, Jr's journals. However, the bulk of the collection concerns his father's work as shipmaster on voyages to Europe and Benjamin, Jr.'s philosophical writings. The Clifford Crowninshield (1762-1809) Papers, 1692-1961, are comprised of shipping and personal papers that describe his work as shipmaster and merchant trading in India, Europe and America. The bulk of the material is composed of ships papers and legal documents relating to the capture of the ship *George* (alias *West Chapelle*) by the British in 1796. The Bowdoin B. Crowninshield (1867-1948) Papers, 1870-1946, extend from 1870 to 1946 and represent an excellent source on early twentieth-century yacht design. The correspondence, record books and account books in this collection can be used in conjunction with the associated collections of ship drawings and photographs preserved at the Peabody Museum.

The Upton Family Papers, 1819-1945, document trade with South America. Of particular interest are the papers of the brig *Granite* during its trading years, 1841-1850, before it was lost off the Falkland Islands in 1850. The Dorr Family Papers, 1781-1865, concern trading between Boston and Europe (particularly Amsterdam), South America and Canton. Specifically the collection contains materials on a shipment of furs to Canton on the ship *Astrea* and documents on the ship *Esther* which was condemned in Lima in 1823 for alleged violation of Peruvian trade regulations.

The Cushing and White Papers, 1773-1852, are especially rich in Revolutionary War privateering materials. The privateering records of the ship *Minerva* and the sloop *Satisfaction* document in depth the activities of these two vessels.

The Benjamin Shreve (1780-1839) Papers, 1793-1848, provide a clear picture of the China trade during the years 1813-1822. Included is considerable documentation of the ship *China* (including information on a cargo of opium from Salem to Canton) and the brigs *Canton, Comet, Governor Endicott* and *New Hazard;* descriptions of the trade in silks, export china, teas and various textiles; accounts of negotiations and agreements with Hong merchants and details of these vessels' voyages.

Michael Shepard's (1786-1856) Papers, 1809-1893, relate to Salem's involvement in the East African trade particularly in ivory, gum copal, textiles and cloves from 1835-1855. He formed partnerships with John Bertram in Salem and B. Frank Fabens and Charles Ward who also served as his agents in Zanzibar. Locally, Shepard was extremely active in the Baptist church.

The papers of the Fernald and Petigrew Shipyard, 1840-1865, of Portsmouth, N.H. are important because of their comprehensive documentation of the various daily business transactions of one of Portsmouth's most active shipyards. Much of their work was in building clipper ships. The shipyard built seven in five years by refusing to shut down during the winte months. The Josiah Fox (1763-1847) papers, 160 1987, document the life and work of one of the premi American naval architects and shipbuilders of the la eighteenth and early nineteenth centuries. In additio to records relating to the frigates *Chesapeake, Congress, Crescent, Essex, President, United States* and *Raleigh,* these papers also provide insights into labor relations in naval shipyards of the period. The Samuel S. Crocker (1890-1964), papers, 1916-1986, another naval architect, provide the researcher with a detailed view of yacht design and building in New England from 1924-1964.

The final three collections of papers document the East Indian trade. The Thomas Wigglesworth, Jr. (1814-1907) papers, 1824-1868, include mostly market reports and prices current. The John William Stark (1788-1836) papers, 1810-1826, are important for their observations of the Calcutta market from 1812-1815 where Stark was forced to remain during the War of 1812. The Appleton Family papers, 1780-1857 mostly concern shipping activities and cargoes from Salem to Canton, Calcutta and Sumatra.

This project has enabled the Phillips Library of the Peabody Museum of Salem to process a significant portion of its backlog of maritime history manuscripts. Those researchers who are interested in using these materials should contact the librarian/archivist at the Museum.

Book Reviews

C.P. KUNHARDT, *Small Yachts, Their Design and Construction* (Brooklin, Maine: WoodenBoat Publications, Inc., 1985). 8¾″ × 12″, hardcover or paper, 372 pages, 150 line-cuts of plans and pictures, and extensive table of contents. Hardcover, $30.00, paper, $20.00. Reprint of 1891 edition, edited and abridged.

Yacht design experts who write books are often looked upon as overly opinionated. This is a good thing because a healthy argument over a yacht design never does any harm, and it might do a lot of good.

And if anyone thinks such discussions are a development in recent years, we have news: *Small Yachts* was first published 100 years ago; later it was revised and edited for a new edition in 1891. It is the 1891 edition that has been edited and abridged by the editors of *WoodenBoat* magazine to create this 1985 edition. *Small Yachts* is believed to be the first American study of yacht design.

C.P. Kunhardt was yachting editor of *Forest and Stream* magazine, and the popularity of his writings was in no small way linked to his candor in discussing designs of that era. But Kunhardt was something more than a magazine writer who wrote commentaries on certain yacht designs. His background gives some clue to his competence in the field of yacht design and his skill in commenting on how these designs worked out. He was born around 1848 at Staten Island, N.Y. His father owned Kunhardt and Co., a major shipping firm. The family home was a big waterfront estate where almost anyone could develop an interest in the sea.

Young Kunhardt graduated from the U.S. Naval Academy in 1870, but his naval service was cut short when he developed 'coast fever' while on duty in Panama. He resigned from the service in 1873.

He then designed, built and delivered two gunboats to the government of Haiti. Following this, he went abroad for several years, finally coming home to become yachting editor of *Forest and Stream,* a position he held from 1878 to 1884. In his work with the magazine he developed a large following who either loved or hated his writings.

When he left *Forest and Stream,* he bought the iron steamship *Madrid* which he proceeded to convert into another gunboat for Haiti. She was renamed the *Conserva*. Again, Kunhardt had charge of the delivery of the ship to the Haitian government. On 25 March 1889, the SS *Colorado* found some wreckage of the *Conserva* off Cape Charles; later, the *Conserva*'s lifeboats were found. There were no survivors, and it was believed the ship had been in a collision with another, perhaps at night. In any case, Kunhardt went down with his ship.

Forest and Stream, in a final tribute to Kunhardt in April of 1889, said, 'Kunhardt's sharp and trenchant pen made some enemies, the truths he told were unpalatable and time alone can bring true recognition of the pioneer work he did, not alone for the yachts themselves but for the literature of yachting.'

When the magazine spoke of time bringing recognition of Kunhardt's work, it is of interest to note that Johathan Wilson, editor and publisher of *WoodenBoat* and the publisher of the Kunhardt book observed that 'Kunhardt was more than the editor of *Forest and Stream*'s yachting sections and more than the fanatic he was considered by many to be. He was an impassioned champion of wisdom and good sense in yacht design and though he was opinionated in the extreme, he was remarkably open to the expression of opposing views.'

Small Yachts contains data, including plans, for about sixty small sailboats. This was the era when keel sailboats were long and narrow, depending upon tons of ballast to keep them steady. The rest of the sailboats in the book are various types of catboats with greater beam but still with plenty of ballast. The choice of plans open to review is a wide one, but it is interesting to look at three types: German, English and American, to see how Kunhardt wrote about them.

The American yacht is the twenty-three-foot *Coot,* a South Bay catboat built at Patchogue, N.Y. The designer is not listed, but Kunhardt calls her design 'of a better sort.'

Kunhardt wrote, 'She is able and fairly smart in smooth water and will live through very coarse

weather though unsuited in model and rig for efficient service in rough water,' and added, 'she will not turn to windward against a sea like a heavier boat but shows lack of weatherly powers common to all beamy craft of light displacement. In squally winds, considerable skill and alertness is required to prevent capsize unless the area of canvas be moderate. This fact is or should be, enough to condemn the construction of the type wherever there is enough water for greater draft and depth of body.'

Despite these harsh words, Kunhardt in 1886 took the *Coot* for a single-handed trip of 1500 miles from New York to Beaufort, S.C., and returned in midwinter. The *Coot* carried 700 pounds of iron ballast and 200 pounds of stores and equipment. Kunhardt observes that she would have been abler with an additional 300 pounds of ballast aboard.

The British yacht example is the *Dodge,* a keel catboat with a length of fourteen feet, nine inches and beam of three feet, six inches. She drew three feet.

The *Dodge* was designed as a tender for a schooner yacht. Her construction was quite modern: she was 'planked' with two thin cedar skins with 'the outer one overlapping the seams of the inner and both riveted together.' She had no frames and was built over a temporary mold. This little sloop was steered by a 'yoke connected to a footboard, canoe fashion, leaving the crew with both hands free.' An oscillating seat was mounted in the bilge, and the skipper could adjust the seat to correct the boat's trim if a second person was on board.

She carried a half-ton of ballast, half of which was cast lead and the balance in shot bags. When she was to be hoisted aboard the schooner, the shot bags were first unloaded onto the schooner's deck.

Kunhardt thought she was quite a boat, but he would have been happier if she had been fitted with covers for the cockpit to avoid being swamped by the wake of large steamers.

The third yacht we use here as examples from the book was the *Nuckel,* which was designed by Marine Engineer Saefkow of the Imperial German Navy as a test model for a larger yacht. The *Nuckel* was fast in light winds and showed equal ability in heavy seas.

'She has been heeled to 50 degrees,' Kunhardt wrote, 'and as might be expected, she flies back to a vertical. The cockpit can be partially closed by folding boards along the coming so that no water will pour in even in a knockdown to 75 degrees.'

The *Nuckel* was a twenty-one-foot sloop with a beam of five feet. She drew three feet, eleven inches with a one-ton keel. The *Nuckel* was famous as a dry craft.

Kunhardt had a lot of respect for German yachts. He pointed out that they combined the best of British practices to give yachts heavy weather ability, plus the best of American designing for smoother waters.

Small Yachts is filled with fascinating goodies. Kunhardt lists what he considered appropriate 'stores and equipment' for the *Coot,* including some prices. In addition to a $4.00 stove, Kunhardt included pictures, sketching and writing materials, a library and photographic equipment. He was going to have a cozy little twenty-three footer.

And cozy many of the yachts were, as revealed by a color print on the back cover of the paper-back edition which shows varnished, panelled cabin walls with bright red upholstery.

This is not a book to be easily put down once you begin to read it.

JOHN R. HERBERT

Spring Hill, Florida

J.R.S. PHILLIPS, *The Medieval Expansion of Europe,* (New York and Oxford: Oxford University Press, 1988). ix and 303 pages. $29.50.

This volume by J.R.S. Phillips deals with a most important subject, the medieval expansion of Western Europe between 1000 and 1500 AD which preceded its movement out on the world scene during the age of discoveries which followed Columbus' and Vasco da Gama's expeditions to America and India respectively.

Its first section starts with a chapter entitled "The Beginnings of a Medieval Expansion of Europe". This briefly details what geographical knowledge ancient Graeco-Roman civilization possessed of other sections of the world and how this information was preserved and added to during the early medieval centuries in Western Europe. Then in a second chapter the author turns his attention to the eleventh century and the various factors which by then had begun to launch Latin Europe on the road to internal and external expansion. This is then followed by a third chapter which sketches the growth of Italian trade in the Mediterranean and the establishment of Western

Crusades in Syria and Palestine in the course of the twelfth and thirteenth centuries.

In the next section of this volume which is entitled "Europe and Asia" the author turns his attention to a careful examination of the rise of the Mongol Empire during the thirteenth and fourteenth centuries and Western European contacts of a commercial, religious and diplomatic sort with much of Asia as represented by this great Mongol imperial expanse which spread from China to Iran and even into and India that lay between the two. Marco Polo's voyages and those of his European contemporaries are examined in a specially critical manner in the three chapters which form the section of Phillip's study.

Then we find a third portion of the book entitled "Two Continents and an Ocean" which examined critically Latin Europe's contacts with Africa and North America down to the time of Columbus with special emphasis on Portugal's movement down the coast of Africa and examines theories as to European pre-Columbus contacts with the New World.

The study then continues with two more sections. The first examines Western Europe's scholarly knowledge and popular views of the world beyond its borders during this entire period of four and a half centuries and the state of its geographical knowledge of the wider world. The second attempts to relate this medieval expansion with that which took place after 1450 AD. And it comes to the conclusion that this later expansion of Western Europe on the world scene was not really new but esentially a continuation of what had taken place already during earlier medieval centuries.

In trying to assess the value of this work to the scholarly world one needs to understand that its author has deliberately considered Latin Europe's expansion in a very narrow sense—one that is essentially geographical. He has attempted to show where Western Europeans ventured beyond medieval Europe proper during these years into Asia, Africa and the Atlantic and how knowledge of such travels reached Western Europe. He shows that some of this travel was absorbed directly by the upper class and some was more fanciful and appealed to a wider public. In doing so he has researched and presented a remarkable list of travelers who ventured beyond Western Europe especially in Mongol times. And he comes to the conclusion, completely valid in the view of this reviewer, that later fifteenth and sixteenth century European expansion was in many ways a continuation of that which took place during medieval times.

What may concern scholars, however, is not that anything he says is untrue, for it is not, but that his view of Western European expansion during these centuries is much too limited. For instance in dealing with the Crusades he largely limits himself to the area of Syria and Palestine. Almost nothing is said of expansion into the Byzantine world of Romania after the Fourth Crusade, and of the long-term establishment of Latins in Frankish, Greece, Constantinople and the Greek islands. The Reconquista of Spain which most of us view as part of this crusading expansion on the widest scale if only dealt with in passing as a sort of prelude to expansion into Africa. The same can be said of Livonia, Prussia and movement in that direction into Russia itself or its borders. The crusading expansion on the widest scale is only dealt with in passing as a sort of prelude to expansion into Africa. The same can be said of Livonia, Prussia and movement in that direction into Russia itself or its borders. The Crusading expansion of Europe then is only viewed in a very narrow sense.

One is equally surprised that a number of specific institutions developed during medieval times which flourished and even made possible the age of exploration are hardly mentioned. One of these is the sugar plantations and the slavery that accompanied it which, as Verlinden has explained, begun in twelfth century Syria, was spread by the Genoese throughout the islands of the Mediterranean to Southern Spain and Portugal and then during the fifteenth century helped to make offshore islands like Madeira and the Cape Verde's profitable long before it reached the New World. And nobody reading this volume would be aware that the cattle ranch developed first of all during the thirteenth century in the newly conquered world of Southern Spain long before it spread to the Americas during the sixteenth century. The same can be said of the fur trade developed in the Baltic area and especially Russian Novgorod and then transferred later on to North America, or of mining skills whose New World development owed so much to technical skills found in Central Europe and Spain before 1500. And why does the author not emphasize more than he does the spread of fishing from the North Sea and Loftöten Islands off Norway out into Icelandic waters on its

progress across the Atlantic to the Grand Banks and New England? The same can be said of whaling which followed a similar path.

When we turn to institutions of government the same thing is true. Colonial governments of the sixteenth century and later on were derived from a viceregal system developed by Aragonese in the Mediterranean, for the Colonial government of Venice in Romania, to England's use of overseas viceroys in Ireland and Gascony long before Columbus crossed the Atlantic—to mention only a few examples—and the consuls established by Italian, Catalans and Provencals in the fonduks of the Moslem East or North Africa were the precursors of those found in the Colonial worlds of overseas Europeans.

Particularly unfortunate is the author's failure to mention the importance for Europe's later expansion of its medieval development of bulk transport by sea and the financial means to handle it by the salt traders of Venice whom Houcquet has studied, of the Hansa's commerce in fish and wheat, of the timber trade of both the Mediterranean and northern seas of Europe. All of these were easily transferred across the Atlantic to the New World later on.

And what of that capitalism, unique in the world of its time, which had developed in the Mediterranean by the thirteenth century and by the fifteenth had moved north to places like Antwerp and which financed overseas expansion throughout the Seven Seas later on? And what of the chartered company which had its first use by the Genoese in the *Mahone* and the *Bank of St. George?* One could go on and on.

To sum up everything written by Professor Phillips is true and useful to scholars. But his essentially geographical view of Europe's expansion is much too narrow. What Europe developed during the High Middle Ages was not only travellers who visited distant areas of Asia, Africa and the Atlantic and cartographers and others who reported this to Western Europe, but also the maritime, governmental and economic elements of a civilization which came into being and could be easily used to expand overseas later on. There was a pause in this expansion during the late fourteenth and early fifteenth centuries due to the Black Death, the bankruptcy of Florentine financial houses like the Bardi's and Peruzzis, the religious and the political failures of the Great Schism and the Hundred Years War and the rise of the Ottomans. But it was only a pause. The expansion of Europe then resumed towards a world destiny that had begun even before the eleventh century and which had grown all through the Medieval years of its existence.

ARCHIBALD R. LEWIS
Marblehead, Massachusetts

DUDLEY POPE, *The Devil Himself: The Mutiny of 1800* (London, England, The Alison Press, distributed by David & Charles, Inc., North Pomfret, VT, 1987), 186 pages, 9½″ × 6¼″, cloth, one map with insets, one reproduced document, notes, bibliography, index, $24.95.

During the age of fighting sail, the captains of naval vessels lived with the fear of mutiny lurking constantly in the back of their minds. The worst possible form of mutiny occurred when the crew of a ship overpowered their officers, siezed the vessel and delivered her into the hands of the enemy in time of war. In the case of the great naval insurrections at Spithead and the Nore, this was only just averted, while in the instance of the frigate *Hermione* it actually happened. Her captain and officers were slaughtered and the ship turned over to the Spanish by the mutinous crew.

Despite the horror they inspired, mutinies that went this far were quite rare. One of the more obscure cases is that of the British frigate *Danae* which was seized by mutineers on 14 March 1800 while on routine blockade duty and taken to Brest, where she was surrendered to the French. Her young captain, Lord Proby, his officers and loyal crewmen were detained as prisoners-of-war until they could be exchanged under cartel. Proby and one of his lieutenants, John Huntingdon, had been wounded by cutlass blows to their heads during the brief scuffle leading to the capture of the *Danae,* but they were the only casualties.

As reconstructed by Mr. Pope, the *Danae* mutiny and its aftermath display a curious flatness relative to the sensational and dramatic circumstances surrounding other seizures such as the *Bounty* and *Hermione* insurrections. In the *Danae*'s case, there was no harsh and overbearing sadist striding the quarterdeck. The crew did not appear to harbor smoldering resentment or stark desperation born out of fear of the lash. There was no pattern of searing injustice, no colorful ringleader and no dramatic clash of wills or tempera-

ment. Indeed, the *Danae* was a very ordinary ship and it was ordinary practices and problems that led to her undoing.

Originally she had been launched as the French corvette *La Vaillante,* a fast sailing, rather lightly-gunned vessel intended for convoy escort and commerce raiding duties. She was captured after a few voyages to the Caribbean and taken into the British Navy as a small frigate. The British spoiled her sailing by rearming her with 32-pound carronades, put her in charge of a young but promising captain, Lord William Allen Proby, and sent her out to join the blockading squadron off Brest where she operated close inshore taking a few prizes and observing French activity.

In common with most of the smaller ships of the Royal Navy, *Danae* was always chronically short of men and her captain lost no opportunity to press additional hands from whatever sources came his way. Eventually his zealous efforts netted a large number of Irishmen, a critical mass of merchant seamen claiming to be Americans and even six "Frenchmen" pressed into the British service from the captured privateer *Bordelais*. It was these men who planned and organized the mutiny, waited until a routine chase had taken the *Danae* close inshore, seized the ship by overpowering the watch on deck and securing the three main hatchways to trap the watch below. Upon surrendering the ship to the port authorities at Brest, they were briefly lionized by the French press, eventually rewarded with funds realized from the sale of the *Danae* to a civilian shipowner, and allowed to drop out of sight. Only two were ever recaptured and tried by the British for mutiny. The officers and loyal seamen were returned to England where they were court-martialled and found innocent of any wrongdoing relative to the loss of the ship. Lord Proby continued his successful career but soon died of yellow fever while commanding a large frigate in the Caribbean.

JAMES E. VALLE

Delaware State College

FRANK LAWRENCE OWSLEY, JR., *The C.S.S. FLORIDA: Her Building and Operations*. 2nd ed. (Tuscaloosa, Alabama: The University of Alabama Press, 1987). 210 pages, illustrations, appendices, bibliography, index. $15.95.

In the opinion of Alfred Thayer Mahan the depredations of the Confederate commerce raiders such as the *Alabama* and the *Florida* affected the outcome of the Civil War not a jot. Perhaps. Mahan had the luxury of having been on the winning side. But whatever their effect on the war, the *Florida* and her sister had an enormous effect on the peace. As Professor Owsley points out in his introduction to this new edition, prior to 1861 the American merchant marine was in decline but had not, as he puts it, "fallen to a level from which it could not have recovered." The *Florida* helped provide the "fatal push."

The story of the *Florida* is not just the daring adventures of her first captain, the dashing John Newland Maffitt and her second, the more cautious (and ultimately careless) Charles M. Morris. It is a tale of wartime diplomacy and diplomatic tightrope walking, of protest after protest by United States representatives as British officials interpreted—and reinterpreted—Britain's Declaration of Neutrality. The United States's failure to sign the Treaty of Paris (which outlawed privateering) resulted in the French pointing out that even if the *Florida* were a "privateer," which the French denied, as she held a Confederate commission, the United States was "not entitled to any protection" from the treaty.

Finally, though United States representatives had, during the *Florida*'s two-year career, attempted with considerable skill to use international law to national advantage, even though not usually with much success, the capture of the *Florida* in the harbor of Bahia, Brazil, by the USS *Wachusetts* in October 1864, was a blatant violation of Brazilian neutrality and that same law. Later, long after the *Florida* had conveniently and "accidentaly" sunk, Secretary of State Seward formally apologized to Brazil.

The CSS Florida is a fascinating and useful book. It can be read on several levels: as adventure (U.S. cloak and dagger in Liverpool; commerce raiding on the high seas; the *Florida*'s incredible dash into—and out of—Mobile and Lieutenant Charles Read's raid on Portland, Maine), as a study in command: Maffitt vs. Morris, and finally as a study of United States Civil War diplomacy. Owsley does a superb job of telling a complicated story simply.

The book, however, has one flaw, though far from a fatal one, and that is occassionally in matters of detail. Owsley uses the term "clipper" very freely. The World War I German commerce raider *Seeadler* was far from being a clipper. In his list of the *Florida*'s captures, Owsley notes clipper ship after clipper ship.

Perhaps as many as half that list could be described as clipper; the rest were ordinary merchantmen. On the name of the *Florida*'s last capture, Owsley may be forgiven, as it has been spelled a number of different ways at various times, but a look at the *American Lloyds' Register* gives the *Mondamin* of Baltimore, not the *Mandamis*. That said, on balance, the book is worth a careful reading—an rereading.

NICHOLAS DEAN

Edgecomb, Maine

JOHN H. SCHROEDER, *Shaping A Maritime Empire: The Commercial and Diplomatic Role of the American Navy* (Westport: Greenwood Press, 1985). 229 pages, index, no illustrations.

It is in the nature of things that written history tends to be episodic. Historians are wont to leap from event to event describing each and relating one to the other, leaving days, weeks, years and sometimes centuries hanging listlessly in between. Such has often been the case in American naval history.

Seapower is a story best told in the context of wars so it is hardly surprising that early American naval history usually begins in the Revolution, moves on to the Quasi War and Barbary corsairs, finds glory in the War of 1812, pauses momentarily at the Mexican War and then lands at the Civil War. Even when discussed the submerged valleys lying between these peaks are often given short shrift, usually not more than a few pages at the end or beginning of chapters devoted to more weighty topics. The result is a rather uneven prospect of our navy's history in which we view a monochrome image with occasional bursts of color. Happily, Schroeder's book takes us off this narrow path and presents the history of the American navy during the oft neglected period from the age of Jackson to the election of Lincoln.

America in the 1830s, 40s and 50s was a nation filled with confidence, righteousness, and an unnerving tendency towards expansion. At home expansion meant territory while overseas it translated into trade. The latter involved the navy.

As Schroeder points out naval activity in matters of trade was reactive. With some notable exceptions, Matthew C. Perry being the most prominent, neither naval officers nor civilians had any overarching Mahanian like views of grand strategy. Instead, the navy was content to follow the lead of two powerful groups, one internal and the other external.

Pressure for naval support from within the United States came from shipowners, merchants and traders who sought protection for their whalers and merchant vessels sailing in foreign seas. The other lobby consisted of diplomats and missionaries residing abroad, who, whenever they felt threatened, either by natives or by other western nations, called for naval support. It was, according to Schroeder, all rather haphazard. The results, however, were not haphazard. American commerce grew and with it the navy. Despite strong agrarian influence, invariably hostile to the naval power, as well as the constant distraction of sectional politics, naval appropriations spiraled upward during the period as did the size of the navy itself. While all this happened in fact, in theory policymakers continued to cleve to outmoded Jeffersonian concepts concerning the army and the navy.

Obviously what Schroeder is describing is the time honored disjunction between theory and practice, rhetoric and reality. That American policy makers did not practice what they preached ought not to come as any surprise to an historian, and so Schroeder's juxtaposition seems a trifle artificial.

WILLIAM M. FOWLER, JR.

Northeastern University

ROGER F. DUNCAN, *Friendship Sloops* (Camden, Maine: International Marine Publishing Company, 1985). 8½″ × 11″, hard cover, 208 pages, 128 illustrations, appendices, bibliography, and index. $35.00.

This must be the definitive volume about the Friendship sloop, those handsome and seaworthy clipper-bowed, gaff-rigged vessels of Muscongus Bay which after generations of service as fishermen have found great favor with yachtsmen of a certain stripe and continue to thrive despite the hollow charge that they are an obsolete design. The new book replaces and goes well beyond two or three other books about Friendships, published by the Friendship Sloop Society and long since out of print. It covers their evolution and development, the peculiarities of their construction, the history of their employment by Maine fishermen during the nineteenth and early twentieth centuries, their later appreciation by yachtsmen, and the recent transition from wooden to fiberglass reinforced plastic construction.

The author, who knows his subject as well as or better than anyone alive, is a skillful writer, owner/skipper of the Friendship sloop *Eastward* and co-author of *The Cruising Guide to the New England Coast*. Although the new book is copiously illustrated with photographs and a few excellent drawings, one finds himself wishing for yet a few more drawings to clarify some of the characteristic construction details.

There is a fascinating chapter on exploits and disasters in which Friendship sloops have figured including modern piracy and kidnapping, hurricanes and sinkings. Another informative chapter tells how to sail a Friendship sloop.

The author has included not only a listing and genealogy of the more than two hundred sloops registered with the Friendship Sloop Society and a score of other as well, but also a record of winners of the annual races conducted by the Society since 1961. Anyone who enjoys sailing, who admires a handsome vessel, and has a taste for history and the coast of Maine, will find this book delightful reading.

CHARLES S. MORGAN

Concord, Massachusetts

CYNTHIA OWEN PHILIP, *Robert Fulton, A Biography* (New York: Franklin Watts, 1985), 371 pages. $18.95.

Even by the latitudinarian standards of the late twentieth century Robert Fulton must be accounted a strange character. He seems to be better fitted for the Hellfire Club than for an assemblage of 'great American inventors.' He was probably bisexual, almost certainly an adulterer and a demonstrated liar. There could hardly have been a day in his adult life when he was not tangled in some unseemly controversy with those around him leaving a trail of acrimony across England, France and America. The pieces of his life are sharp, bright and entrancing but somehow when Philip cements the mosaic together we are left with subdued hues that seem to bleed into one another leaving us with an image whose totality is clearly less than its parts.

Through exhaustive research Philip has gathered an immense pile of information about Fulton, his early life, the long period spent abroad in England and France, and of course the heady days of steamboating on the Hudson and western rivers. Through it all she has Fulton strutting, posturing, writing, inventing, painting and playing. To a degree this is as it should be, the subject must always be the focus for the biographer, but on the other hand what about the 'times'? Fulton is presented on a dimly lit stage; it is more like a one-man show than the lavish production that his life must have been. Little mention is made of the political, social and economic environments in which he functioned and malfunctioned. Key questions regarding national policy in matters of transportation, finance and patents are left unanswered. One might argue that these issues are not relevant, after all this is a biography not a history of early America; yet, without addressing them, we are left to value a man in isolation. This is a good biography inasmuch as the author has quarried the material in an admirable and exhaustive fashion; what she has not done is to share with us the joy of life that must have characterized Robert Fulton.

Fulton is best remembered as the man who invented the steamboat and sent the *Clermont* up the Hudson River. Neither of course is correct, as Philip rightly points out. The genealogy of steamboat invention is complex and Fulton is only a single player, and *Clermont* was not the name of Fulton's boat. Even before his arrival on the Hudson, Fulton had already accomplished a good deal. He was a talented artist and a well known designer and promoter of canals. His obsession was applying steampower to move vessels; his genius was to organize an effort that would achieve this and make money. Fulton was as much an entrepreneur as an inventor. Inevitably in a work so packed with data certain small errors have crept in. Benjamin Latrobe is hailed as the republic's first great architect; those in Boston might want to make a similar case for Charles Bulfinch. Likewise, Henry Eckford is touted as America's first great naval architect; Philadelphians might rightly suggest the honor belongs to Joshua Humphreys. Also, Benjamin Crowninshield was not Secretary of War but Secretary of the Navy.

WILLIAM M. FOWLER

Boston, Massachusetts

LINDA M. MALONEY, *The Captain from Connecticut: The Life and Naval Times of Isaac Hull* (Boston: Northeastern University Press, 1986), cloth, xviii + 480 pages, illustrations, maps, endnotes, index, $45.

Isaac Hull earned a spot in the American Pantheon as the captain of the 44-gun frigate *Constitution* in the United States Navy's first battle with the Royal Navy in the War of 1812. At the beginning of that war, with public opinion shattered by the unexpected loss of Detroit and the capitulation of American troops under Hull's uncle, Hull and the *Constitution* fought a brief and smashing victory against the 38-gun frigate *Guerriere*, commanded by Sir James Dacres. The navy, which previously had a tenuous hold on the esteem of the people and the Republican Administration—Mr. Madison gave serious thought, only three months before the *Constitution*'s victory, to laying up every ship to use as floating gun batteries in the harbors—became the toast of the nation, and Britain knew that it could no longer take single-ship actions for granted. Rarely has one ship at one time done so much.

Hull made an interesting hero to his contemporaries as he has to historians. Brother naval officers like Stephen Decatur were perhaps the epitome of the Romantic hero, dashing, elegant, yet tempestuous. Hull, a roly-poly, good-natured man, tried to avoid the public eye and contention. After voluntarily relinquishing the command of the *Constitution*, he spent the remainder of his naval career as the Boston Navy Yard commander, and took his turn as commander of the U.S. naval squadrons in the Pacific and in the Mediterranean.

In 1947, the first serious biography of Hull, Bruce Grant's *Isaac Hull: Captain of Old Ironsides*, was published. Grant's entertaining, fast-paced biography concentrated on Hull's part in the fighting during the quasi-war with France (1798-1800), the war against the Barbary pirates (1802-1806), and the war against Britain of 1812-15.

With *The Captain From Connecticut*, Linda Maloney has now written the second biography of Hull, a painstaking, scholarly tome. Ms. Maloney is a graceful writer with a thoughtful eye for detail. Although there is much to commend in this book, the book is too much to commend. More than half of the book concerns events after the *Constitution-Guerriere* clash. Ms. Maloney catalogues Hull's post-1815 life with encyclopaedic scope: Hull's domestic situation and debts, the embezzlement scandals and court-martials that rocked his tenure at the Boston Navy Yard, and his peacetime Pacific and Mediterranean commands all receive minute attention. Yet upon reading all of it, one is left unclear how or why such detail on Hull's life is relevant or meaningful to any larger mosaic. Ms. Maloney does not tell her readers, explicitly or implicitly, why all this attention is necessary. Perhaps because Ms. Maloney's exhaustive, twenty-year mining of the archives evidently revealed more post-1815 material, Hull's post-1815 life struck her as more important than his earlier years. E.H. Carr once wrote that Caesar's crossing of the Rubicom is an important historical fact, but "the crossing of the Rubicom by millions of other people before or since interests nobody at all." The last half of Ms. Maloney's biography is Hull commuting across that stream.

Nevertheless, the same toiling in the archives has produced some excellent insights and brought forward some new facts. Much valuable correspondence is displayed here for the first time. President Adams' intense interest in the *Constitution* and Hull in 1798—the ship "employs my thoughts by day and my dreams by night" and "[n]o lieutenant in the service stands fairer in my mind" than Isaac Hull—has escaped previous historians' efforts. An 1806 letter from the Secretary of the Navy, Robert Smith, to President Jefferson, recommending Hull and Charles Stewart for promotion to captain is also new, and is important as a reflection of their standing in their superiors' eyes. Indeed, Hull's relations with his brother officers come alive, particularly in the pre-1812 years, on the basis of the correspondence Ms. Maloney has unearthed and her trenchant comments.

The *Constitution-Guerriere* fight is wonderfully recounted. Dacres's hubris and utter contempt for Americans comes through clearly: he dared any American frigate to come out for "a few minutes of tête-à-tête; "he had emblazoned *Guerriere*'s topsail with the motto 'Not the Little Belt' in derisive reference to the 1811 pounding of the British sloop by an American frigate; and, according to Ms. Maloney, on spying the *Constitution* approaching, Dacres sniffed and claimed it "comes down too boldly for an American." In four superb pages, Ms. Maloney reconstructs the battle, pithily observing that "Hull would not play at long bowls."

Despite the length of the book, Ms. Maloney gives rather short shrift to significant episodes in Hull's early life. For instance, Hull commanded the *Argus* off Derna in 1805. The *Argus* supplied critical naval gunfire support to colonel Eaton's motley band of Marines, Greek mercenaries, and Arab adventurers in the storming of Derna. Hull's bombardment may have been the first time a U.S. warship provided fire support

to an overseas Marine expedition. Yet the episode is treated in passing and without any analysis.

Ms. Maloney does provide valuable insights as to Hull as a man. He learned from Silas Talbot, his first commander, to distribute responsability and credit: Hull allowed his first lieutenant, Charles Morris, to assume an active role in directing the *Constitution*, an atmosphere that enabled Morris when the becalmed *Constitution* was in danger at being captured by a British squadron, to suggest Kedging as a means of escape. Hull's report to the Secretary of the Navy after sinking the *Guerriere* is magnanimous and modest. Hull was no martinent, and respected his men, a feeling that was clearly reciprocrated and not uniform among captains. When Bainbridge, before the entire ship's company assumed command of the *Constitution* from Hull, discipline broke, the men swarmed around Hull, and told Bainbridge to his face of their preference for Hull.

The Captain From Connecticut will be the last word on Hull. No biographer could amass more about this jovial man who had a penchant for splitting his breeches in tense moments. Unfortunately, in putting forward so much about Hull, Ms. Maloney seems to have lost focus on why Hull is significant. Although the book shows great effort and is written with a light, deft touch, its bulk and lack of focus will deter all those who are not devotees of Isaac Hull.

FREDERICK C. LEINER

Baltimore, Maryland

MERCHANTS BOSTON AND NEW ORLEANS STEAMSHIP COMPANY
Steamship Concordia

ORIGINAL OLD AMERICAN

Paintings · Prints · Maps

BOUGHT AND SOLD

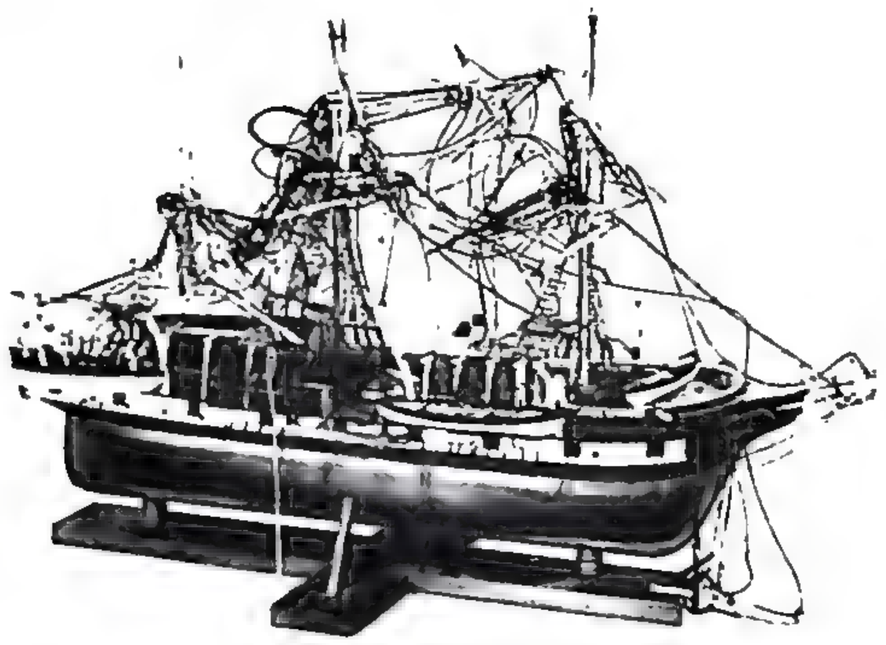
CLIPPER SHIPS — STEAM SHIPS — AMERICAN NAVALS
Maps – Birds – Flowers – Portraits
American Town Views
Correct Framing

THE OLD PRINT SHOP

KENNETH M. NEWMAN

150 Lexington Avenue, at 30th Street New York, N. Y. 10016

Established 1898 Tel. MUrray Hill 3-3950



R. Michael Wall's
AMERICAN
MARINE MODEL
GALLERY

The largest, most experienced dealer of Museum Quality marine models.

RESTORATION APPRAISAL
CUSTOM DISPLAY CASES

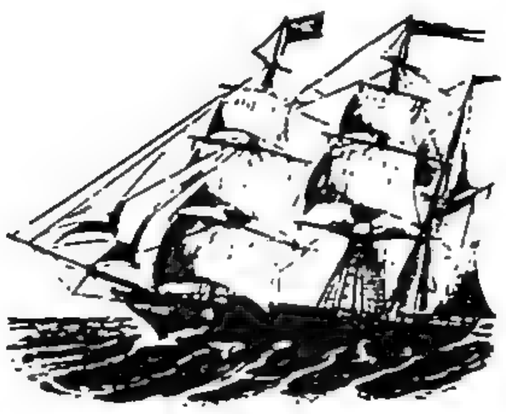
MEMBER:
International Congress of Maritime Museums
International Society of Fine Arts Appraisers, Ltd.
Nautical Research Guild

Send for free information.
Appointment preferred.

Dept. AN 20 Front Street, Salem, MA 01970 • 617-745-5777

MARINE CATALOGUES

Rare & Out-of-Print
Nautical Books



BARK FLORIDA.

$4.00 USA
$6.00 Foreign

JULIAN BURNETT, BOOKS
P. O. Box 229
Atlanta, Ga. 30301

EDWARD J. LEFKOWICZ, INC.

Rare Books & Mss.
Relating to the Sea & its Islands
& to Nautical Science

Publishers of Fine Maritime Books

P O Box 630
Fairhaven Massachusetts 02719 USA

New Maritime History Titles for Spring

Admiral Harold R. Stark: *Architect of Victory, 1939–1945*

by B. Mitchell Simpson, III

This is the first book-length biography of Admiral Harold R. Stark, Chief of U.S. Naval Operations from 1939–1942, who enjoyed a close relationship with President Roosevelt, successfully convinced Congress to approve the shipbuilding programs that produced the Two Ocean Navy, prepared the Plan Dog Memorandum on national and allied war strategy, led the way to cooperation with the British, and planned and supervised the naval preparations for the invasion of Europe. *"...the only solid account of the Navy high command in the European Theater of Operations during the war. The primary sources utilized open significant new details alongside standard treatments of World War II."—Clark G. Reynolds, Department of History, College of Charleston*

Approximately 400 pages, Cloth, 0-87249-596-5, $24.95

History and the Sea: *Essays on Maritime Strategies*

by Clark G. Reynolds

The ten essays in this book represent a quarter-century of the author's thinking about the strategic uses of the sea by true maritime great powers and by land-bound continental nations. The author believes that geographic and strategic factors have largely shaped the characteristics of these states; his major evidence derives from their use of navies. *"Anyone interested in naval subjects will enjoy these articles because they are written in a clear and concise style. The philosophy and objectives of naval affairs are well presented, allowing the reader to gain a better understanding of the function of a navy."—Frank L. Owlsey, Jr., Department of History, Auburn University*

Approximately 192 pages, Cloth, 0-87249-614-7, $24.95

Lifeline of the Confederacy: *Blockade Running During the Civil War*

by Stephen R. Wise

A comprehensive study that describes the tremendous maritime trade that flowed into Southern harbors from Texas to Virginia. Highlighted with numerous maps, illustrations and a listing of more than 300 blockade runners, this book analyzes the impact of blockade running on the Southern war effort—a vivid story of the revolutionary vessels and unknown individuals who made up the supply system known as the "Lifeline of the Confederacy." *"...an outstanding book which should be the standard work on the Blockade for years to come. His massive research has resulted in a work which is more nearly complete than anything done before. In addition to being an interesting story, Lifeline of the Confederacy contains a gold mine of information on the subject including accounts of the ships engaged in the service, the dates of their voyages, and other interesting information which cannot be found in any other work."—Frank L. Owlsey, Jr., Professor of History, Auburn University*

403 pages, Illustrated, Cloth, 0-87249-554-X, $24.95

Now Available in Paperback

A Maritime History of the United States: *The Role of America's Seas and Waterways*

by K. Jack Bauer

A pioneering study of the role of civilian maritime activities in the development of the United States, this book stresses the crucial role played by the oceans, rivers, lakes and canals in the history of the nation. *"If Dr. Bauer had answered only the "whats" and "whens" of America's maritime past, this book would be an excellent reference tool. He goes beyond this to answer the infinitely more difficult "whys" and "hows." This makes the work useful to all maritime scholars. But more important, by reading this work carefully the general reader can conclude for himself what has gone wrong in our maritime world. This is what make s this book a classic in the field."—Proceedings*

359 pages, Cloth, 0-87249-519-1, $24.95, Paper, 0-87249-671-6, $12.95

University of South Carolina Press

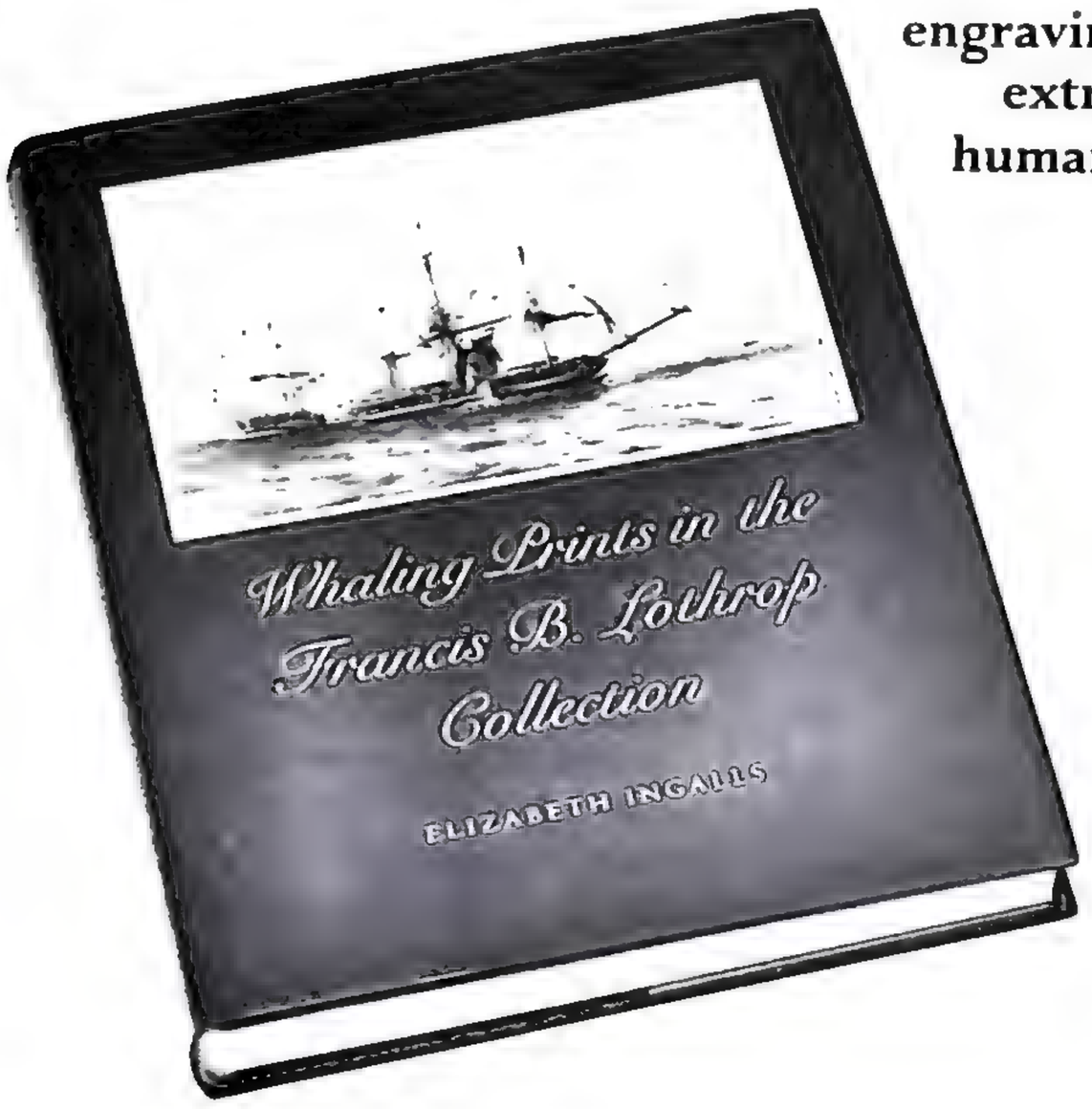
Columbia, South Carolina 29208, (803) 777-5243

MasterCard and Visa accepted

WHALING PRINTS IN THE FRANCIS B. LOTHROP COLLECTION

by Elizabeth Ingalls

Francis B. Lothrop began collecting whaling prints in the 1920s and continued for the next sixty years. His collection, now housed in the Peabody Museum of Salem, forms one of the most important resources of its kind in the world. It covers a broad spectrum from early book engravings to zoological prints, an extraordinary compendium of humanity's perception of whales over the past 400 years.

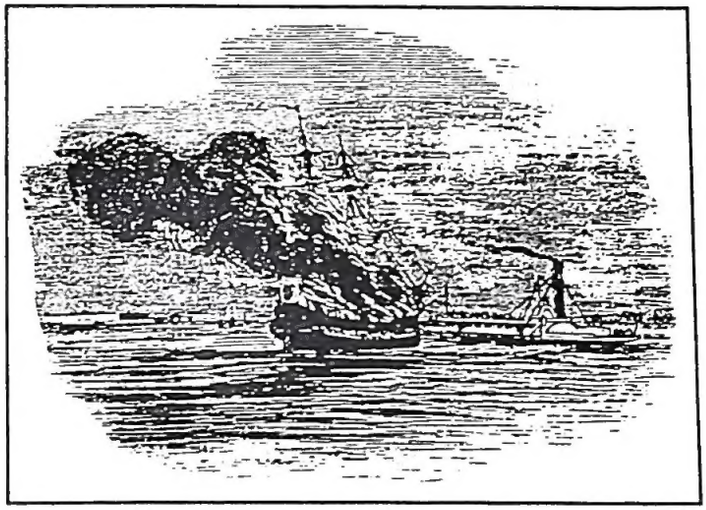


324 pp., over 600 illustrations including 24 color plates

$75.00

The Shop at the PEABODY MUSEUM of SALEM
East India Square
Salem, MA 01970
tel 617-745-1876

RELATED BOOKS IN THE SHOP AT THE PEABODY MUSEUM



Society for Historical Archaeology
P.O. Box 231033
Pleasant Hill, California 94523-1033

PRICE: $12.50

Now Available!

Underwater Archaeology Proceedings
from the
Society for Historical Archaeology Conference
Reno, Nevada 1988

First Edition American Whaling Epic

IN THE WAKE OF WHALES

The Whaling Journals of Capt. Edwin Brown 1841-1847

Limited First Printing – complete logbooks of Captain Edwin Brown, with over 500 original sketches drawn at sea 1841-47, on his 3 global whaling voyages. Includes whaling history plus unusual biography of the Captain, ship histories, fold-out charts, early maps, glossary, full index, and numerous illustrations. A large, impressive volume of over 400 pages printed on museum grade stock 8½" x 11" in size. Printed in superb LIBRARY EDITION of only 750 copies. Order from your bookstore, or mail check and order direct.

LIBRARY EDITION: $57.50, shipping and postage incl.

LEATHER BOUND DELUXE EDITION

Limited Edition of 250, hand numbered and bound in Italian Maroon leather with gold imprinting. Added custom details plus facsimile log end papers. Few copies of Deluxe Edition remain available – orders limited to stock on hand. DELUXE EDITION: $150, postage paid.

OLD ORIENT PRESS, INC. P.O. Box 243-B, Orient, NY 11957

THE PEABODY MUSEUM SHOP

An Excellent Resource for Collectors and Scholars

The Museum Shop stocks well over 1,000 titles, including many rare and unique volumes on a wide variety of subjects. In fact, the Shop has the reputation of being one of the best resources for finding books on maritime history, American Indians, Pacific cultures, Africa, natural history, China, India and Japan.

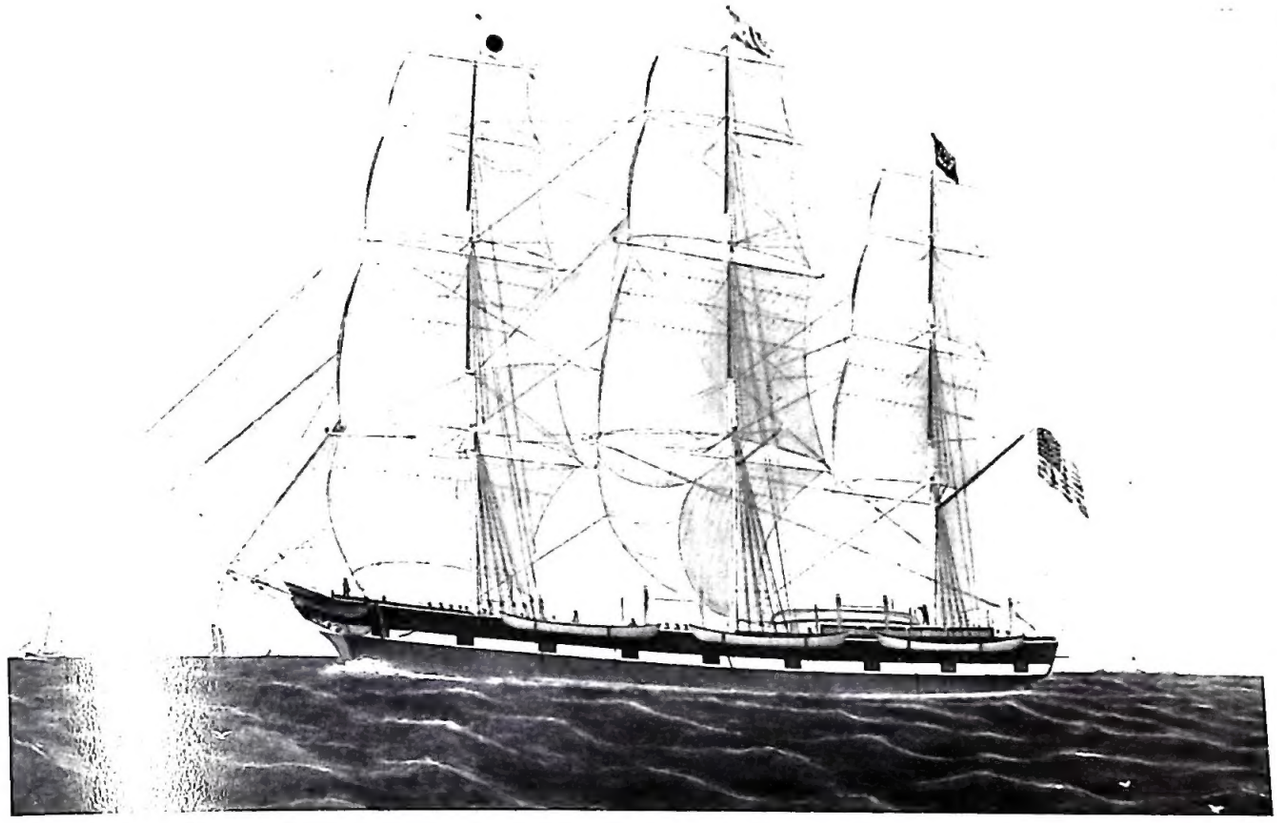
The Shop at the Peabody Museum is an excellent resource for collectors and scholars alike. And if the title you are looking for is not available at your local book shop, the Museum Shop will pride itself in finding it.

Books are mailed promptly to all customers; Visa, MasterCard and American Express cards are accepted.

Subscribers to *The American Neptune* are entitled to a 10 percent discount on all books.

508-745-1876, ext. 136

BENJAMIN RUSSELL



Benjamin Russell
(American, 1804-1885)
Whaler, *Cincinnati* of Stonington, CT
Watercolor on paper, 20 x 30 inches

Full Color Exhibition Catalogs:
Marine Art Retrospective $12.50
Jay Hall Connaway, NA $12.00
Katherine Johnstone Bronzes $8.50

QUESTER GALLERY

Exceptional Marine Paintings, Models & Antiques Appraisal, Restoration & Framing Services Available

On The Green/P.O. Box 446 Stonington, CT 06378 Tel: (203) 535-3860 Fax: (203) 535-3533 Open Daily

Published by

PEABODY MUSEUM of SALEM, East India Square, Salem, MA 01970